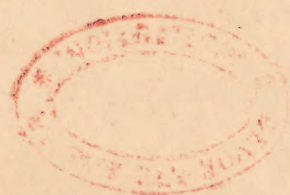


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FLORA LONDINENSIS;

O R,

PLATES AND DESCRIPTIONS

OF SUCH

P L A N T S

A S G R O W W I L D

I N T H E

E N V I R O N S O F L O N D O N :

WITH THEIR

PLACES OF GROWTH AND TIMES OF FLOWERING,

THEIR

Several NAMES, according to LINNÆUS, and other Authors :

WITH A PARTICULAR DESCRIPTION OF EACH

P L A N T

I N L A T I N A N D E N G L I S H .

TO WHICH ARE ADDED,

T H E I R S E V E R A L U S E S ,

I N M E D I C I N E , A G R I C U L T U R E , R U R A L Œ C O N O M Y , A N D O T H E R A R T S .

B Y W I L L I A M C U R T I S .

V O L . I I .

L O N D O N :

Printed for and Sold by the AUTHOR, No. 3, *St. George's-Crescent, Black-Friars-Road.*

1798.

FLORA LONDINENSIS

OF

PLATES AND DESCRIPTIONS

OF SUCH

PLANTS

AS GROW WILD

IN THE WATERSIDE OF THE

ENVIRONS OF LONDON



General Names, according to Linnaeus, and other Authors

FLORA LONDINENSIS

PLANTS

IN LATIN AND ENGLISH

IN SHORT DESCRIPTIONS

OF THE PLANTS

THEIR SEVERAL USES

IN MEDICINE, AGRICULTURE, AND OTHER ARTS

By WILLIAM CHARLES

AND JOHN GILBERT

VOL. II

LONDON

Printed for and sold by the Author, No. 1, Pall Mall East

1798



JOHN COAKLEY LETTSOM, M.D.

THE FRIEND OF HUMANITY,

THE PATRON OF SCIENCE,

THIS SECOND VOLUME

OF THE

FLORA LONDINENSIS,

IS MOST RESPECTFULLY

INSCRIBED,

BY

HIS MUCH OBLIGED FRIEND,

WILLIAM CURTIS.

I N D E X I.

In which the Plants contained in the fourth Fasciculus are arranged according to the System of LINNÆUS.

<i>Latin Name.</i>	<i>Class and Order.</i>
1 Hippuris vulgaris	MONANDRIA Monogynia.
2 Veronica montana	DIANDRIA Monogynia.
3 Valeriana dioica	TRIANDRIA Monogynia.
4 Scirpus maritimus	TRIANDRIA Digynia.
5 Panicum viride	
6 Panicum verticillatum	
7 Panicum sanguinale	
8 Panicum crus galli	
9 Eriophorum polystachion	
10 Eriophorum vaginatum	TETRANDRIA Monogynia.
11 Holcus lanatus	
12 Milium effusum	
13 Scabiosa arvensis	
14 Plantago media	
15 Asperula odorata	
16 Cynoglossum officinale	PENTANDRIA Monogynia.
17 Menyanthes trifoliata	
18 Symphytum officinale	
19 Vinca major	
20 Samolus valerandi	
21 Campanula rotundifolia	
22 Chironia Centaurium	PENTANDRIA Digynia.
23 Chenopodium hybridum	
24 Bunium Bulbocastanum	
25 Chærophyllum sylvestre	
26 Myosurus minimus	
27 Peplis Portula	PENTANDRIA Polygynia.
28 Polygonum amphibium	HEXANDRIA Monogynia.
29 Polygonum Convolvulus	OCTANDRIA Digynia.
30 Silene anglica	OCTANDRIA Trigynia.
31 Arenaria trinervia	DECANDRIA Trigynia.
32 Arenaria serpyllifolia	
33 Sedum sexangulare	
34 Spergula nodosa	
35 Spergula saginoides	
36 Euphorbia exigua	
37 Clematis Vitalba	DODECANDRIA Trigynia.
38 Ranunculus repens	
39 Ranunculus hederaceus	
40 Galeobdolon Galeopsis	
41 Stachys arvensis	
42 Prunella vulgaris	
43 Scutellaria minor	POLYANDRIA Polygynia.
44 Orobanche major	
45 Antirrhinum Orontium	
46 Raphanus Raphanistrum	
47 Turritis glabra	
48 Cardamine hirsuta	
49 Geranium pratense	TETRADYNAMIA Siliquosa.
50 Malva moschata	
51 Trifolium glomeratum	
52 Hypericum quadrangulum	
53 Sonchus arvensis	
54 Hieracium Pilosella	
55 Arctium Lappa	MONADELPHIA Decandria.
56 Cichorium Intybus	
57 Bidens tripartita	
58 Jasion montana	
59 Ophrys spiralis	
60 Carex riparia	
61 Carex acuta	MONADELPHIA Polyandria.
62 Carex gracilis	
63 Parietaria officinalis	
64 Equisetum arvense	
65 Bryum barbatum	
66 Phascum acaulon	
67 Phascum subulatum	DIADELPHIA Decandria.
68 Jungermannia complanata	
69 Agaricus procerus	
70 Agaricus velutipes	
71 Agaricus floccosus	
72 Boletus lucidus	
73 Phallus caninus	POLYADELPHIA Polyandria.

SYNGENESIA Polygamia Æqualis.

SYNGENESIA Monogamia.
GYNANDRIA Diandria.

MONÆCIA Triandria.

POLYGAMIA Monæcia.
CRYPTOGAMIA Filices.

CRYPTOGAMIA Musci.

CRYPTOGAMIA Fungi.

I N D E X II.

Latin Names of the Plants in the fourth Fasciculus, arranged Alphabetically.

	Plate
Asperula odorata	15
Arenaria trinervia	31
Arenaria serpyllifolia	32
Antirrhinum Orontium	45
Arctium Lappa	55
Agaricus procerus	69
Agaricus velutipes	70
Agaricus floccosus	71
Bunium Bulbocastanum	24
Bidens tripartita	57
Bryum barbatum	65
Boletus lucidus	72
Cynoglossum officinale	16
Campanula rotundifolia	21
Chironia Centaurium	22
Chenopodium hybridum	23
Chærophyllum sylvestre	25
Clematis Vitalba	37
Cardamine hirsuta	
Cichorium Intybus	
Carex riparia	
Carex acuta	
Carex gracilis	62
Eriophorum polystachion	9
Eriophorum vaginatum	10
Equisetum arvense	64
Euphorbia exigua	36
Geranium pratense	49
Galeobdolon Galeopsis	40
Holcus lanatus	11
Hypericum quadrangulum	52
Hieracium Pilosella	54
Hippuris vulgaris	1
Jasione montana	58
Jungermannia complanata	68
Milium effusum	12
Menyanthes trifoliata	17
Myosurus minimus	26
Malva moschata	50
Ophrys spiralis	59
Orobanche major	44
Panicum viride	5
Panicum verticillatum	6
Panicum sanguinale	7
Panicum Crus galli	8
Plantago media	14
Peplis Portula	27
Polygonum amphibium	28
Polygonum Convolvulus	29
Prunella vulgaris	42
Parietaria officinalis	63
Phascum acaulon	66
Phascum subulatum	67
Phallus caninus	73
Ranunculus repens	38
Ranunculus hederaceus	39
Raphanus Raphanistrum	46
Scirpus maritimus	4
Scabiosa arvensis	13
Symphytum officinale	18
Samolus valerandi	20
Silene anglica	30
Spergula nodosa	34
Spergula saginoides	35
Sedum sexangulare	33
Stachys arvensis	41
Scutellaria minor	43
Sonchus arvensis	53
Turritis glabra	47
Trifolium glomeratum	51
Veronica montana	2
Valeriana dioica	3
Vinca major	19

I N D E X III.

English Names of the Plants in the fourth Fasciculus, arranged Alphabetically.

	Plate
ARCHANGEL yellow	40
BRYUM bearded	65
BUCKWHEAT climbing	29
BUCKBEAN	17
BROOM-RAPE common	44
BELL-FLOWER heath	21
BOLETUS lacquer'd	72
BURDOCK	55
CAREX great or common	60
CAREX acute	61
CAREX slender-spiked	62
CLUB-RUSH round-rooted or sea	4
COW-PARSLY common	25
CHICKWEED plantain-leaved	31
CHICKWEED thyme-leaved	32
CATCH-FLY English	30
CRANES-BILL crowfoot	49
CROWFOOT ivy-leaved	39
CROWFOOT creeping	38
CENTAURY	22
COMFREY	18
COTTON-GRASS many-headed	9
COTTON-GRASS single-headed	10
EARTH-NUT	24
GOOSE-FOOT thorn-apple-leaved	23
HOUNDS-TONGUE	16
HOODED-WILLOW-HERB small	43
HORSE-TAIL corn	64
HEMP-AGRIMONY trifid	57
JUNGERMANNIA flat	68
LADIES-SMOCK hairy	48
LADIES-TRACES	59
MOUSE-TAIL	26
MOUSE-EAR	54
MARES-TAIL	1
MUSHROOM shaggy	71
MUSHROOM velvet-stalked	70
MUSHROOM tall	69
MILLET-GRASS wood	12
MALLOW musk	50
MORELL red-headed	73
PURSLANE water	27
PHASCUM common	66
PHASCUM heath	67
PANIC-GRASS green	5
PANIC-GRASS rough	6
PANIC-GRASS loose	8
PANIC-GRASS cocksfoot	7
PLANTAIN hoary	14
PERSICARIA amphibious	28
PERRYWINKLE great	19
PELLITORY of the wall	63
RADISH wild	46
SPEEDWELL mountain	2
ST. JOHN'S-WORT square-stalked	52
SELFHEAL	42
SOFT-GRASS meadow	11
SNAP-DRAGON small	45
SCABIOUS field	13
SOWTHISTLE corn	53
SPURRY knotted	34
SPURRY pearlwort	35
STACHYS corn	41
SPURGE small	36
SHEEPS-SCABIOUS hairy	58
SUCCORY blue	56
STONECROP insipid	33
TOWER-MUSTARD smooth	47
TRAVELLERS-JOY	37
TREFOIL round-headed	51
VALERIAN marsh	3
WOODRUFF	15
WATER-PIMPERNEL round-leaved	20



HIPPURIS VULGARIS. MARE'S-TAIL.

HIPPURIS *Lin. Gen. Pl.* MONANDRIA MONOGYNIA.

Cal. 0. *Petala* 0. *Stigma* simplex. *Sem.* 1.

Raii Syn. Gen. 5. HERBÆ FLORÆ IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

HIPPURIS *vulgaris.* *Lin. Syst. Vegetab.* p. 51. *Sp. Pl.* p. 6. *Fl. Suec. n.* 2.

PINASTELLA. *Dillen. Nov. Gen.* p. 168.

LIMNOPEUCE. *Haller. Hist.* p. 264. *Vaillant. Mem. de l'Acad. anno 1716, t. 1. f.* 3.

POLYGONUM *fæmina.* *Matth. in Diosc.* p. 952. *Dodon. Pempt.* p. 113.

EQUISETUM *palustre brevioribus foliis polyspermon.* *C. B. pin.* 15.

EQUISETUM *palustre alterum brevioribus fetis.* *Park.* 1200.

CAUDA EQUINA *fæmina.* *Ger. emac.* 1114. *Raii Syn.* p. 136. *Hudson. Fl. Angl. ed. 2. p.* 2. *Lightfoot Fl. Scot.* p. 70.

RADIX perennis, repens, geniculata, alba, geniculis plurimis fibris capillata.	ROOT perennial, creeping, jointed and white, the joints furnished with numerous capillary fibres.
CAULES plurimi, sesquipediales et ultra, erecti, simplices, glabri, striati, teretes, spongiosi, fig. 1, medulla filiformi, compacta, in radicibus tenaci.	STALKS numerous, a foot and a half or more in height, upright, simple, smooth, striated, round, spongy, fig. 1, the pith like a thread in the centre, compact, and in the roots tough.
FOLIA verticillata, octo circiter, brevia, linearia, glaberrima, avenia, ad lentem punctata, punctis excavatis.	LEAVES growing in whirls, about eight in number, short, linear, perfectly smooth, without veins, dotted when magnified, the dots appearing hollow.
FLORES hermaphroditi plerumque, presertim vere, ad finem æstatis plures fæmineos observavi, axillares, sessiles.	FLOWERS for the most part hermaphrodite, especially in the spring; at the close of the summer I have observed many of them to be female, growing in the axæ of the leaves, and sessile.
CALYX nullus.	CALYX none.
COROLLA nulla.	COROLLA none.
STAMEN: FILAMENTUM unicum, apici germinis infidens, primo brevissimum, demisso poliline longitudine pistilli. ANTHERA biloba, purpurascens, majuscula, fig. 2, 3.	STAMEN: a single FILAMENT, sitting on the top of the germen, at first very short, on shedding the pollen becoming as long as the pistillum. ANTHERA composed of two lobes, purplish, and rather large, fig. 2, 3.
PISTILLUM: GERMEN oblongum. STYLUS brevissimus, nudus. STIGMA subulatum, album, ad lentem villosum, fig. 4, 5, 6.	PISTILLUM: GERMEN oblong. STYLE very short, naked. STIGMA tapering to a point, white and downy when magnified, fig. 4, 5, 6.
PERICARPIUM nullum.	SEED-VESSEL none.
SEMEN unicum, oblongum, nudum, suboffeum, intus album, medio fuscum, membranâ seu arillo tenui obtectum, fig. 7, 8, 9.	SEED single, oblong, naked, hard, white within, and in the centre brown, covered with a thin membrane or arillus, fig. 7, 8, 9.

Greater simplicity in the construction of a flower can scarcely exist than in the *Hippuris*. Here we have neither calyx, corolla, nor seed-vessel; and those parts which are universally considered as essential to the fructification, are, in the present instance, as few as possible, there being only one stamen, with its corresponding pistillum, yet perfect seed, and that in considerable quantity, is produced.

The *Hippuris* here described, which takes its name from the Greek ἵππυρις, five *Cauda equina*, is not the *Hippuris* of the first Botanists. They applied the term to our *Equisetum*, the *Hippuris* of LINNÆUS is the *Polygonum fæmina* of DIOSCORIDES, and arranged by his commentator MATTHIOLUS with our *Polygonum aviculare* and *Herniaria*. Succeeding Botanists imagining, from the growth of its leaves, or from its producing seed, that it had better pretensions to be ranked with the *Equisetum*, absurdly enough called it *Cauda equina fæmina*, to which Mr. HUDSON could not well avoid giving the English name of *Mare's-tail*.

Although common in many parts of *Great-Britain*, this plant is very rare about *London*; Mr. HUDSON mentions it as growing in a part of the New-River near *Hornsey*, where it may still be found.

It flowers and produces its seeds from *June* to *August*.

In running streams it is frequently extended to a great length; and we have been informed, that in some rivers it is an exceedingly troublesome weed, which we can the more readily believe, having experienced its roots to be of the most powerfully creeping kind.

A transverse section of its stalk is a beautiful microscopic object.

On examining this plant we have sometimes found its flowers to be female only.



Veronica montana.

VERONICA MONTANA. MOUNTAIN SPEEDWELL.

VERONICA. *Linn. Gen. Pl.* DIANDRIA MONOGYNIA.

Cor. Limbo 4 partito, laciniâ infimâ angustiore. *Capsula* bilocularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

VERONICA *montana* racemis lateralibus paucifloris, calycibus hirsutis, foliis ovatis rugosis crenatis petiolatis, caule debili. *Linn. Syst. Veg. Sp. Pl.* p. 56.

VERONICA caule procumbente, foliis hirsutis, cordatis, retusis, racemis paucifloris. *Haller Hist.* n. 539.

CHAMÆDRYI spuria affinis rotundifolia scutellata. *Baub. Pin.* 249.

ALYSSON Dioscoridis montanum. *Col. Ecph.* 1. 286.

VERONICA Chamædryoides, foliis pediculis oblongis infidentibus. *Raii Syn.* p. 281. Wild Germander with leaves standing on long foot-stalks.

Lightfoot Fl. Scot. p. 6.

Hudson Fl. Angl. ed. 2. p. 74.

RADIX perennis, fibrosa, fibrillis prælongis, fuscis.	ROOT perennial and fibrous, the fibres very long and brown.
CAULES procumbentes, versus basin sæpe radican- tes, pilis mollibus undique hirsuti, pur- purascentes.	STALKS procumbent, often taking root towards the base, round, covered with soft hairs, and purplish.
FOLIA opposita, petiolata, ovato-cordata, obtusiuscula, inæqualiter serrata, hirsutula, nitidula, sub- tus purpurascens, parum concava et bullata.	LEAVES opposite, standing on foot-stalks, ovato cor- date, a little blunt, unequally serrated, slightly hairy, somewhat shining, purplish underneath, a little hollow and cockled.
PETIOLI longitudine fere foliorum, hirsutissimi.	LEAF-STALKS almost the length of the leaves, and very hairy.
RACEMI laterales, alterni, subinde oppositi, tenues, hirsuti, pauciflori.	FLOWER-BRANCHES lateral, alternate, sometimes opposite, slender, hairy, supporting few flowers.
PEDUNCULI alterni, hirsuti, bractæ lanceolatæ suf- fulti.	FLOWER-STALKS alternate, hairy, supported by a narrow floral-leaf.
CALYX: PERIANTHIUM tetraphyllum, foliolis subæ- qualibus, ovatis, basi angustatis, hirsutis, pilis ad lentem globuligeris, fig. 1.	CALYX: a PERIANTHIUM composed of four leaves, which are nearly equal, ovate, narrowed at the base, hairy, the hairs globular at the extremity when magnified, fig. 1.
COROLLA monopetala, rotata, ex purpureo-cærule- scens, supremâ laciniâ saturatius coloratâ, una cum lateralibus venis cæruleis pictâ, in- fimâ minore immaculata, tubus brevissimus, albus, fig. 2.	COROLLA monopetalous, wheel-shaped, of a blueish purple colour, the uppermost segment more deeply coloured than the others, and together with the side ones streakt with blue veins, the lowermost leaf without any veins, the tube very short and white, fig. 2.
STAMINA: FILAMENTA duo, tubo corollæ inserta, basi albida, curvata, medio crassiora; ANTHER- Æ cæuleæ; POLLEN album, fig. 3.	STAMINA: two FILAMENTS, inserted into the tube of the corolla, whitish at the base, bent, thickest in the middle; ANTHERÆ blue; POLLEN white, fig. 3.
PISTILLUM: GERMEN obovatum, hirsutum; STYL- US superne sensim incrassatus; STIGMA capitatum, album, fig. 4, 5.	PISTILLUM: GERMEN inversely ovate, hairy; STYLE towards the top gradually thickened; STIG- MA forming a small white head, fig. 4, 5.
PERICARPIUM: CAPSULA magna, orbiculata, emar- ginata, compressa, fig. 6.	SEED-VESSEL: a large, round, flat CAPSULE nicked at top, fig. 6.
SEMINA pauca, ovata, plana, flavescens, fig. 7.	SEEDS few, ovate, flat, and yellowish, fig. 7.

The *Veronica montana* is very similar in its general appearance to the *Chamædrys*, and of which, by some authors, it has been considered as only a variety; but this has arisen from a very superficial inquiry, as no two plants can be more distinct; LINNÆUS might indeed have selected a specific character, which would effectually have removed every doubt of this kind, viz. the shape and size of the seed-vessels, these in the *montana* are at least thrice as large as those of the *chamædrys*, they are also much rounder and flatter, while the flowers on the contrary are not more than half as large, and much less showy; when we have not these characters to assist us, the stalk and leaves will in general be sufficient, in the *chamædrys* the hairs grow on two sides of the stalk only, in the *montana* they grow all around it, in the *chamædrys* the leaves are generally sessile, in the *montana* they stand on foot-stalks.

These two plants differ also in their places of growth, the *montana*, so far as I have observed it, preferring moist and shady situations, whence the term *montana* seems ill-applied to it; near London, it is found plentifully in Charlton-Wood, behind the Church, and flowers in June and July.

VALERIANA DIOICA. MARSH VALERIAN.

VALERIANA *Linnæi Gen. Plant.* TRIANDRIA MONOGYNIA.

Cal. 0 *Cor.* 1. petala, basi hinc gibba, supera. *Sem.* 1.

VALERIANA *dioica* floribus triandris dioicis foliis pinnatis integerrimis. *Lin. Syst. Vegetab. Sp. Pl. p.* 44. *Fl. Suec. n.* 35.

VALERIANA foliis radicalibus petiolatis ovatis; caulinis pinnatis, sexu distincta. *Haller. hist.* 208.

VALERIANA *dioica.* *Scopoli Fl. Carn. n.* 40.

VALERIANA palustris minor. *Bauhin. p.* 164.

VALERIANA minor. *Ger. emac.* 1075.

VALERIANA sylvestris minor. *Park.* 122.

Raii Syn. p. 200. Small wild Valerian, or Marsh Valerian. *Hudson. Fl. Angl. ed.* 2. *p.* 12. *Lightfoot Fl. Scot. p.* 85.

RADIX perennis, geniculata, repens, crassitie pennæ coracis, albida, rubore aliquando tincta, odore subaromatico valerianæ sylvestris.

CAULIS pedalis aut sesquipedalis, erectus, simplex, tetragonus, striatus, lævis; rami pauci, striati.

FOLIA opposita, radicalia integerrima, ovata obtusa, caulina pauca, pinnatifida, pinnis duodecim circiter, venosis, obtuse ferratis.

FLORES subcorymbosi, rubelli, dioici, femineis multo minoribus; *fig.* 1. flor. femin. magn. nat. *fig.* 2. flor. masc.

BRACTEÆ plurimæ, lanceolatae, floribus subiectæ.

FLOS FEMIN.

CALYX vix ullus, margo superus, *fig.* 7.

COROLLA monopetala, tubus a latere inferiore gibbus, nectariferus; *limbus* quinquefidus, laciniis obtusis, subæqualibus; antherarum rudimenta intra tubum cernantur.

PISTILLUM: GERMEN inferum, ovatum, compressum, sulcatum, longitudine fere corollæ; STYLUS albus, superne paulo incrassatus, corolla paulo longior, obliquus; STIGMA trifidum, *fig.* 6, 7, 8, 9.

SEMEN ovato-oblongum, pallide fuscum, hinc carinatum, illinc trinerve, pappo piloso coronatum, *fig.* 11, 12, 13.

FLOS MASC.

CALYX et corolla sicut in fem, *fig.* 2.

STAMINA: FILAMENTA tria, filiformia, corolla longiora; ANTHERÆ albæ; seu pallide rubentes, *fig.* 5. Pistillum imperfectum in centro floris, *fig.* 10.

ROOT perennial, jointed, creeping, the thickness of a crow-quill, white, sometimes tinged with red, having nearly the same aromatic smell as the wild valerian.

STALK a foot or a foot and a half high, upright, unbranched, four-cornered, striated and smooth; branches few and striated.

LEAVES opposite, the radical ones entire, ovate, obtuse, those of the stalk few, pinnatifid, pinnæ about twelve in number, veiny, and obtusely serrated.

FLOWERS forming a kind of corymbus, of a pink colour, and dioicous, the female flowers much the smallest; *fig.* 1. a female flower of its natural size; *fig.* 2. a male flower.

BRACTEÆ numerous, lanceolate, placed beneath the flowers.

FEMALE FLOWER.

CALYX scarce any, being only a prominent rim surrounding the top of the germen, *fig.* 7.

COROLLA monopetalous, the tube gibbous on the under side, and containing honey; the limb divided into five segments, which are blunt and nearly equal; rudiments of Antheræ are visible within the tube, *fig.* 1.

PISTILLUM: GERMEN placed below the corolla, ovate, flat, grooved, nearly the length of the corolla; STYLE white, somewhat thickened near the top, a little longer than the corolla, oblique; STIGMA trifid, *fig.* 6, 7, 8, 9.

SEED of an ovate oblong shape, and pale brown colour, a single rib on one side, and three on the other, crowned with a feathery down, *fig.* 11, 12, 13.

MALE FLOWER.

CALYX and corolla the same as in the female, *fig.* 2.

STAMINA: three FILAMENTS filiform, longer than the corolla; ANTHERÆ white, or pale red, *fig.* 5. an imperfect Pistillum in the centre of each flower, *fig.* 10.

There are few plants in which nature sports more than in the Valerians, even out of the *four* species which we have growing wild with us, *one* is monandrous, viz. the *rubra*, and *another* dioicous, as the present. These deficiencies in their classical character are however the less to be lamented, as they furnish excellent specific distinctions.

The *dioica* is found only in wet and boggy situations; in the meadows and osier-grounds about *Battersea* it grows abundantly; its blossoms before they open are of a bright red colour, and being collected into small heads, are very conspicuous among the herbage in the month of April; in June and July it produces its downy seeds, which, for their beauty and singular manner of expanding their pappus or down, are highly deserving the attention of the curious.

The roots having a similar smell, and probably the same medicinal virtues, as the officinal Valerian, may be substituted in lieu thereof, if necessary.

What SCOPOLI asserts of this plant is so contrary to the common opinion of Botanists and our own observations, that we cannot forbear subscribing his own words; they will either prove that his observations are not to be depended upon, or that this plant puts on a very different appearance in *Carniola* than it does in the other parts of *Europe*.

“*Millena specimina examinavi et nunquam vidi flores dioicos, sed nunc omnes hermaphroditos, nunc filamento uno aliove castrato instructos, nunc masculos et femineos in eadem planta, ita tamen ut masculi flores continerent rudimentum germinis et styli; sine feminibus vero perfectis nullam hactenus inveni plantam.*”



Valeriana dioica.

SCIRPUS MARITIMUS. ROUND-ROOTED or SEA CLUB-RUSH.

SCIRPUS *Lin. Gen. Pl.* TRIANDRIA MONOGYNIA.

Glumæ paleaceæ, undique imbricatæ. *Cor.* o. *Sem.* 1 imberbe.

Raii Syn. Gen. 28. HERBÆ GRAMINIFOLIÆ NON CULMIFERÆ FLORE IMPERFECTO SEU STAMINEO.

SCIRPUS *maritimus* culmo triquetro, panícula conglobata foliacea spicularum squamis trifidis: intermedia subulata. *Lin. Syst. Vegetab.* p. 86. *Sp. Pl.* p. 74. *Fl. Suec.* n. 47.

SCIRPUS *maritimus.* *Scopoli Fl. Carn.* n. 57.

GRAMEN cyperoides panícula sparsa majus. *Bauh. pin.* 6.

GRAMEN cyperoides palustre panícula sparsa. *Parkin.* 1266. *Raii Syn.* p. 425. Water or Marsh Cyperus Grass, with a sparsed panicle.

CYPERUS rotundus littoreus inodorus. *Lob. ic.* 77. rotundus inodorus Anglicus. *C. B. Pin.* 14. rotundus littoreus. *Ger. emac.* 31. *Park.* 1264. *Raii Syn.* p. 426. Round-rooted Bastard Cyperus. *Hudson. Fl. Angl.* p. 21. *Lightfoot Fl. Scot.* p. 89.

RADIX perennis, repens, crassitie calami scriptorii, palide fusca, stolonibus sub finem anni apice bulbosis.

CULMUS bi seu tripedalis, erectus, foliosus, triquetus, angulis subasperis.

FOLIA plurima, septem sive octo, pedalia aut sesquipedalia, lineas duas lata, sensim acuminata, ad carinam et oras vix aspera, basi vaginata, vagina minutissime striata, nitida.

INVOLUCRUM: folia plerumque duo, rarius tria, inæqualia, longa, ad oras et carinam aspera.

PANICULA terminalis, maxime varia, aliquando enim constat spiculis quinque vel sex conglobatis sessilibus, sæpius vero præter has utrinque oritur pedunculus, tres quatuor vel quinque gerens spiculas.

PEDUNCULI glabri, nudi, ad spiculas subincrassati.

SPICULÆ magnæ, unciales fere, ovatæ; acutæ, primo atro purpureæ, demum ferrugineæ, squamis undique imbricatæ.

CALYX: *Squamæ* fuscae, corrugatæ, scariosæ, carinatae, apice sæpius tridentatæ, dente medio subulato, in infimis flosculis longiore, *fig.* 1, 2.

COROLLA nulla.

STAMINA: FILAMENTA tria, alba, latiuscula. ANTHERÆ, flavæ, lineares, membrana alba minuta terminatæ, *fig.* 3.

PISTILLUM: GERMEN obovatum, minimum, glabrum. STYLUS subulatus, longitudine staminum. STIGMATA tria, capillaria, *fig.* 4.

VILLI quatuor aut quinque, ad basin germinis, albi, erecti ad lentem retrosum aculeati, germini longiores, *fig.* 5.

SEMEN unicum, subtriquetrum, acuminatum, fuscum, nitidum, *fig.* 6.

ROOT perennial, creeping, the thickness of a goose-quill, of a pale brown colour, the shoots at the end of the year bulbous at their extremities.

STALK two or three feet high, upright, leafy, three-cornered, the angles somewhat rough.

LEAVES numerous, seven or eight, a foot or a foot and a half in length, two lines in breadth, gradually tapering to a point, the keel and edges scarcely rough, forming a sheath at bottom, which is striated and glossy.

INVOLUCRUM consists generally of two, rarely of three leaves, which are long, unequal and rough on the edges and keel.

PANICLE terminal, and extremely various, sometimes it consists of only five or six clustered spiculæ, but for the most part, besides these, a flower-stalk arises on each side, bearing three, four, or five spiculæ more.

FLOWER-STALKS smooth, naked, somewhat thickened at the spiculæ.

SPICULÆ large, almost an inch in length, ovate, pointed, at first of a blackish purple colour, afterwards ferruginous, covered with scales on every side.

CALYX: *Scales* brown, wrinkled, sonorous to the touch, keeled, having the tip generally furnished with three teeth, of which the middle one runs out to a long point; in the lowermost flowers this is longest, *fig.* 1, 2.

COROLLA wanting.

STAMINA: three FILAMENTS, white and broadish. ANTHERÆ yellow, linear, tipped with a minute white membrane, *fig.* 3.

PISTILLUM: GERMEN inversely ovate, very small and smooth. STYLE tapering, the length of the stamina. STIGMATA three, capillary, *fig.* 4.

HAIRS, four or five at the base of the germen, white, upright, when magnified having prickles which crook backward, longer than the germen, *fig.* 5.

SEED single, somewhat three-cornered, pointed, brown, and shining, *fig.* 6.

LINNÆUS remarks, that this species clothes the sea-shores as the Bulrush does the borders of the inland lakes; but it is frequently found where the water is not salt, as in the river *Thames*, and on the edges of the creeks running from it. In the *Isle of Sheppey*, it fills almost every ditch, and appears to be more perfectly at home.

It flowers from June to August.

The older Botanists made several species of this plant, which LINNÆUS has very properly referred to varieties only. They did not attend to the æconomy of the plant, or they would have found, that the roots, in every variety, were bulbous at the extremities in the autumn; nor to the circumstances of situation, &c. or they would have seen this plant sometimes shorter, sometimes taller, sometimes with a simple, sometimes with a branched panicle, as is represented on the plate.

We know of no use to which this elegant species of Club-Rush is applied. The roots have a remarkably sweet taste, and probably are very nutritious.

Swine are extremely fond of the roots of the *Scirpus palustris*, which the Swedish peasants collect and fodder them with in the winter: the roots of the present species, being much larger, would we conceive be much preferable for this or similar purposes.



Scirpus maritimus

PANICUM VIRIDE. GREEN PANIC GRASS.

PANICUM *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 3-valvis : valvula tertia minima.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

PANICUM *viride* spica tereti, involucellis bifloris fasciculato-pilosis, seminibus nervosis. *Lin. Syst. Vegetab.* p. 502. *Sp. Pl.* p. 83.

PANICUM spica unica, flosculis sessilibus solitariis, setis numerosis. *Haller. Hist.* n. 1542.

GRAMEN paniceum spica simplici. *Bauh. Pin.* 8.

GRAMEN panici effigie spica simplici. *Ger. emac.* 17.

GRAMEN paniceum spica simplici lævi. *Raii Syn.* p. 393. Panic-Grass, with a single smooth ear. *Hudson Fl. Angl.* ed. 2. p. 24.

RADIX annua, fibrosa.

CULMI erecti, pedales et ultra, simplices, subinde ramosi, quatuor aut quinque geniculis distincti, læves.

FOLIA palmaria et ultra, lineas duas, tres, quatuorve quandoque lata, acuminata, lævia, ad margines aspera, in apricis sæpe sanguinea; foliorum *Vagina* striata, lævis, ad internam foliorum basin, loco membranulæ in pilos subtilissimos lineam dimidiam aut paulo plus longos terminatæ, qui pili etiam quandoque vaginæ margines supremas ipsique foliorum basi proximas occupant.

SPICA simplex, teres, cylindracea, uncialis, sesquuncialis et ultra, crassitie pennæ anserinæ majoris, aliquando tota spadicea vel atro-purpurea, alias ex viridi lutescens, luteis pilis, aliquando rubris donata, dense coagmentatis confans spiculis, molliuscula, vestibis nequaquam adhærens; setæ seu pili plurimi, erecti, tortuosi, flosculis triplo longiores, ad lentem aculeati, aculeis erectis. *fig. 1. 2.*

CALYX: *Gluma* uniflora, trivalvis, valvulis duabus oppositis, æqualibus, ovatis, obtusis, nervosis, *fig. 4.* tertia minima, inferne posita. *fig. 3.*

COROLLA: bivalvis, valvulæ ovatæ, concavæ, nitidæ, subæquales. *fig. 5.*

STAMINA: FILAMENTA tria, capillaria, brevissima, corollam paulo excedentia. ANTHERÆ minimæ, purpureæ. *fig. 6.*

PISTILLUM: GERMEN ovatum. STYLI duo, capillares. STIGMATA plumosa, alba. *fig. 7.*

SEMEN unicum, subovatum, tectum, hinc convexum, obsolete nervosum, inde planiusculum. *fig. 8.*

ROOT annual, and fibrous.

STALKS upright, a foot high or more, simple, now and then branched, furnished with four or five joints, and smooth.

LEAVES about a hand's breadth or more in length, two or three lines, and sometimes more, in breadth, pointed, smooth, rough on the edges, in open situations often of a blood-red colour; *Sheath* of the leaves striated, smooth, terminated at the inner base of the leaf, instead of a membrane, by very fine hairs, about half a line or somewhat more in length, which sometimes also occupy the edges of the sheath on its upper part, and of the leaves at their base.

SPIKE simple, round, cylindrical, an inch, an inch and a half or more in length, the thickness of a large goose quill, sometimes wholly of a reddish purple colour, at others greenish yellow, furnished with yellowish, and sometimes reddish hairs, composed of spiculæ closely compacted, soft to the touch, never adhering to garments; setæ or hairs numerous, upright, crooked, thrice the length of the floscules, when magnified furnished with small prickles, which are upright. *fig. 1. 2.*

CALYX: a *Glume* of one flower, and three valves, two of which are opposite, equal, ovate, obtuse, and ribbed, *fig. 4.* the third is very minute, and placed below the others. *fig. 3.*

COROLLA composed of two valves, which are ovate, hollow, shining, and nearly equal. *fig. 5.*

STAMINA: three capillary FILAMENTS, very short, a little longer than the corolla. ANTHERÆ very small, and purple. *fig. 6.*

PISTILLUM: GERMEN ovate. STYLES two, capillary. STIGMATA feathery and white. *fig. 7.*

SEED single, somewhat ovate, covered, convex, and faintly ribbed on one side, on the other flattish. *fig. 8.*

In a former part of this work we gave figures of the *Panicum crusgalli* and *sanguinale*: we here present our readers with two more, being the whole of this genus growing near London.

The *viride* is with us the most common of the four; yet at a distance from town it appears to have few habitats. Mr. HUDSON particularizes *Martha's Chapel* near Guildford; *Batersea Fields* is the only place where we find this, and the others, all of which flower about the same period, viz. *August* and *September*.

To correspond with its name, the *viride* should be always of a green colour; but we often find its foliage red, and its spikes reddish-brown, and the *verticillatum* vice versa: we are not therefore to look for an infallible guide in its colour, but the spike will always distinguish it from the *verticillatum*. Between these two, indeed, there is a more sensible difference to the touch than betwixt the *Alopecurus pratensis* and *Pbleum pratense*; the hairs in the spike of the *viride* are much longer than those of the *verticillatum*, and though the microscope discovers them to be prickly, *vid. fig. 1. 2.* yet these being upright discover no manifest roughness.

Agriculturally it may be considered rather as a weed than an useful grass.

Sparrows are remarkably fond of its seeds: the whole of this genus, when cultivated in a garden, require to be protected from them.



Panicum viride.



Panicum verticillatum.

PANICUM VERTICILLATUM. ROUGH PANIC GRASS.

PANICUM. *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. trivalvis, valvula tertia minima.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

PANICUM *verticillatum* spica verticillata racemulis quaternis; involucellis unifloris bifetis, culmis diffusis;
Lin. Syst. Vegetab. p. 89. *Sp. Pl.* p. 82.

PANICUM spica unica paniculata, fetis paucioribus. *Haller. Hist.* n. 1543.

GRAMEN paniceum spica aspera. *Baub. Pin.* p. 8.

PANICUM vulgare spica simplici et aspera. *Infl.* 515. *Scheuch. Agroft.* 47. *Raii Syn.* p. 394. Rough-eared Panic-Grass. *Hudson Fl. Angl. ed.* 2. p. 24.

Fig. 1. Racemula ramosa magn. nat.

Fig. 2. Pars ejusdem auct.

Fig. 3. Glumæ calycis auct.

Fig. 4. Corolla.

Fig. 5. Stamina.

Fig. 6. Pistillum.

Fig. 7. Semen magn. nat.

Fig. 8. Idem auct.

Fig. 1. One of the small branched racemi of its natural size.

Fig. 2. A part of the same magnified.

Fig. 3. The glumes of the calyx magnified.

Fig. 4. The Corolla.

Fig. 5. The Stamina.

Fig. 6. The Pistillum.

Fig. 7. The seed of its natural size.

Fig. 8. The same magnified.

The *Panicum verticillatum* in its general habit agrees exactly with the *viride*, but in the size and form of the spike, and the parts composing it, it differs very materially: the whole plant is generally one-third larger than that of the *viride*; the spike is larger, and much less compact; it is evidently composed of little branches, which grow somewhat in whirls, whence its name. The setæ or hairs of the spike are considerably shorter than those of the *viride*, and differ from them particularly in being hooked, so that the spike drawn over the back of the hand or cuff of the coat adheres very strongly; and where several spikes grow near each other, they are very apt, from this cause, to become entangled.

I found this plant growing last year very sparingly in the Gardeners Grounds *Batersea Fields*, with the *viride*, and flowering at the same time. Mr. RAY describes it as having been found in a Turnip Field betwixt *Putney* and *Roehampton*, also beyond the *Neat-houses* by the *Thames* side, going from the Horse Ferry above *Westminster* to *Chelsea*. SCHEUCHZER remarks, that it is a troublesome weed in the gardens at *Paris*.



Panicum sanguinale.

PANICUM SANGUINALE. COCK'S-FOOT PANIC-GRASS.

PANICUM *Lin. Gen. Pl.* TRIANDRIA DIGYNIA:

Cal. 3-valvis: valvula tertia minima.

PANICUM *sanguinale* spicis digitatis basi interiore nodosis, flosculis geminis muticis, vaginis foliorum punctatis. *Lin. Syst. Vegetab.* p. 90. *Sp. Pl.* 84.

DIGITARIA foliis subhirsutis, caule debili, spicis verticillatis. *Haller Hist.* n. 1526.

DIGITARIA *sanguinalis.* *Scopoli Fl. Carn.* n. 72.

GRAMEN dactylon latiore folio. *Baubin Pin.* 8.

ISCHÆMON sylvestre latiore folio. *Parkinsf.* 1178.

ISCHÆMON vulgare. *Ger. emac.* 27. Cock's-foot-grass. *Raii Syn.* p. 399. *Scheuch. Agroft.* 101. *Schreb. Agroft.* t. 16. *Hudson Fl. Angl. ed. 2.* p. 25.

RADIX annua, fibrosa.

CULMI ex una radice plures, spithamæi, pedales, sub-rubentes, subinde ramosi, adscendentes, infracti, tenues valde et debiles, quatuor plerumque geniculis distincti.

FOLIA uncialia, sesquiuncialia, et biuncialia, lineas duas aut duas cum dimidia lata, acuta, ad unum latus sæpe undulata, superne et inferne raris pilis hirsuta, marginibus ad lentem minutissime ferrulatis; vagina striata, valde pilosa, pilis e punctis prominulis prodeuntibus.

SPICÆ ternæ, quaternæ, et quinæ plerumque, in cultis sæpe plures, digitatim summo culmo insidentes, sesquiunciam ad quatuor uncias longæ, filiformes, vel eodem loco oriundæ omnes, vel alternatim e summo culmo prodeuntes, et exiguæ ab invicem spatio discretæ, purpureæ, aut ex purpureo et viridante mixtæ.

SPICULÆ secundæ, binæ, rachi adpressæ, pedicellatæ, pedicello altero longiore, longitudine spiculæ, ovato-lanceolatæ, acutæ, nunc purpurascens, nunc virides. *fig. 1, 2, 3, 4. auct.*

CALYX trivalvis, persistens, infima minima, brevissima, nudo oculo vix conspicua, *fig. 2.* secunda et tertia oppositis, inæqualibus, acutis, nervosis, margine scabris, superiore longitudine corollæ quam margine suo amplexatur, inferiore dimidio brevior. *fig. 3, 4.*

COROLLA: bivalvis, valvulis æqualibus, glabris, alterâ alteram recipiente, *fig. 8.* ubi membrana ad basin earum pingitur, *fig. 6, 7.* distinctæ apparent.

STAMINA: FILAMENTA tria, capillaria, corollâ paulo longiora; ANTHERÆ breves, parvæ, purpurascens, utrinque bifurcæ. *fig. 9.*

PISTILLUM: GERMEN oblongum; STYLI duo, filiformes, longitudine staminum; STIGMATA plumosa, purpurea. *fig. 10.*

SEMEN minimum, oblongum glumis calycinis æque ac corollaceis inclusum, *fig. 11, 12.* denudatum, *fig. 13. magnit. nat. fig. 14, 15. auct.*

ROOT annual and fibrous.

STALKS several from one root, a span or a foot in height, of a reddish colour, sometimes branched, bending upward, crooked, very slender and weak, and generally furnished with four joints.

LEAVES an inch, an inch and a half, or two inches in length, and from two to two lines and a half in breadth, pointed, often waved on one side, on both sides beset with a few hairs, the edges when magnified very finely sawed; the sheath striated, very hairy, the hairs proceeding from little prominent points.

SPIKES sitting on the top of the stem, generally three, four or five together, often more in cultivated places, branching out like fingers, from one inch and a half to four inches in length, filiform, all of them proceeding from the same point, or growing alternately, leaving a small space betwixt them, of a dark purple colour, or purple and green mixed together.

SPICULÆ growing one way, pressed to the rachis, standing on foot-stalks, the longest of which is of the length of one of the spiculæ, ovato-lanceolate and pointed, sometimes purplish, and sometimes green. *fig. 1, 2, 3, 4. magnified.*

CALYX composed of three valves, and permanent, the lowermost very minute and short, scarcely perceptible by the naked eye, *fig. 2.* the second and third opposite, unequal, pointed, rib'd, rough on the edges, the upper one the length of the corolla, which it enfolds with its margin, the lower one half its length. *fig. 3, 4.*

COROLLA: composed of two valves which are equal and smooth, the one receiving the other, *fig. 8.* where a small membrane is painted at their base; at *fig. 6.* and *7.* they appear disjoin'd.

STAMINA: three FILAMENTS, very slender, a little longer than the corolla; ANTHERÆ small, short, purplish, forked at each end. *fig. 9.*

PISTILLUM: GERMEN oblong; STYLES two, filiform, the length of the stamens; STIGMATA feather'd and purple. *fig. 10.*

SEED very small, oblong, inclosed by the glumes of the calyx, as well as of the corolla, *fig. 11, 12.* stripped of these, *fig. 13.* of its natural size, and magnified at *fig. 14, 15.*

Modern Botanists are divided in their opinions respecting the genus of this plant, LINNÆUS, SCHREBER, and others considering it as a *Panicum*; ADANSON, HEISTER, HALLER and SCOPOLI arranging it under a new genus, viz. *Digitaria*, a name adapted to the particular disposition of its spikes, but as that particular disposition has little to do with its generic character, and as it has a triphyllous calyx, which LINNÆUS, with much propriety, considers as a principal character of the *Panicum*, we follow him in preference to the others, however respectable. We may observe, that the exterior leaf forming this triphyllous calyx is so very minute, that it may easily be overlooked.

The figures and descriptions, quoted by LINNÆUS, induce us to consider this species as the *sanguinale*, rather than his specific description, which certainly does not well accord with our plant. The *vagina punctatæ* are not mentioned either by HALLER, SCHEUCHZER, or SCOPOLI; the hairs certainly issue from little prominent points, scarcely visible, unless magnified. If LINNÆUS means these, they are, in our apprehension, too minute to form a specific character on.

According to the observations of botanic writers, this species is very universal, being found not only in *Europe*, but *Asia* and *America*; nevertheless, it is not general throughout *England*. It is said to grow about *Elden* in *Suffolk*, at *Witchingham* near *Norwich*, near *Martha's Chapel* by *Guildford*, and in the Gardener's grounds near *Battersea*; in the latter place I found it last *September*, in great plenty; but in one part of the fields only, viz. among the *French* beans, and on the *Asparagus* beds, in the Western corner of the fields, at no great distance from the Church.

MATTHIOLUS relates, that in *Carniola* the seeds are collected for food, but this is flatly contradicted by SCOPOLI; indeed, for this purpose, it appears much inferior to many others of the same genus.

Its name of *sanguinale* is not taken from its colour, but from an idle trick which the boys in *Germany* have of pricking their nostrils with the spiculæ of this grass, till they draw blood.

PANICUM CRUS GALLI. LOOSE PANIC-GRASS.

PANICUM *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 3-valvis: valvula tertia minima.

PANICUM *Crus galli* spicis alternis conjugatisque, spiculis subdivisis, glumis aristatis hispidis, rachi quinquangulari. *Lin. Syst. Vegetab.* p. 90. *Spec. Pl.* p. 83.

PANICUM spica remota, setis nullis. *Haller Hist.* n. 1544.

PANICUM *Crus galli*. *Scopoli Fl. Carn.* n. 70.

GRAMEN paniceum spica divisa. *Baub. Pin.* 8.

GRAMEN paniceum, spica divisa, aristis longis armata. var. β . *Baub. Pin.* 8.

PANICUM sylvestre Herbariorum. *Parkins.* 1154.

PANICUM *vulgare*. *Ger. emac.* 85. *Raii Syn.* p. 394. Panick Grass with a divided Spike. *Hudson Fl. Angl. ed. 2.* p. 24.

RADIX annua, fibrosa.

CAULES plerumque plures ex una radice, primo procumbentes, seu obliqui, demum suberecti, pedales aut bipedales, tribus aut quatuor geniculis distincti.

FOLIA in humilioribus tres quatuorve uncias longa, lineas duas aut tres lata, in procerioribus semipedalia, vel etiam pedalia fere, lineas quatuor, aliquando et sex septemve lata, acuminata, carinata, lævia, marginibus minutissime denticulatis et ad basin circa orem vaginæ pilosis; Membrana nulla; Vagina magna, striata, compressa.

FLORES paniculati.

PANICULA palmaris, et ultra, e pluribus spicis composita, pallide virescens.

SPICÆ sæpe ad duodecim, crassæ, teretiusculæ, plerumque simplices et alternæ, etiam ramosæ et oppositæ, inferioribus sesquiuncialibus, magisque remotis.

RACHIS quinquangularis, angulo quinto obsoleto, ad basin spicarum setosa.

FLORES secundi, turgidi.

CALYX trivalvis, valvula inferiore minore, flosculum recipiente, *fig. 1.* prima et secunda æqualibus, nervosis, mucronatis, hirsutis, altera plana, altera gibbosa. *fig. 2, 3. auct.*

COROLLA bivalvis, valvulis æqualibus, glabris, ovatis, altera alteram margine suâ amplectente, *fig. 4.* intra valvulam calycis et corollæ, membrana tenuis, nunc acuta, nunc emarginata. *fig. 5, 6.*

STAMINA: FILAMENTA tria, capillaria, brevissima; ANTHERÆ bifurcæ, purpurascens. *fig. 7.*

PISTILLUM: GERMEN subrotundum; STYLI duo brevissimi; STIGMATA plumosa, purpurascens. *fig. 8.*

SEMEN majusculum, nitidum, glumis corollaceis tectum, hinc convexum, inde planum, *fig. 9, 10.* denudatum, *fig. 11, 12, 13.*

ROOT annual and fibrous.

STALKS generally several proceed from the same root, at first procumbent or oblique, finally nearly upright, from one to two feet in height, furnished with three or four joints.

LEAVES in the more humble plants three or four inches long, and from two to three lines in breadth; in the taller plants six inches, or nearly a foot in length, four lines, and sometimes six or seven broad, tapering to a point, keeled, smooth, the edges very finely toothed, and about the mouth of the sheath hairy; Membrane none; Sheath large, striated and compressed.

FLOWERS in a panicle.

PANICLE a hand's breadth or more in length, of a pale green colour, composed of many spikes.

SPIKES often twelve in number, thick, roundish, generally simple and alternate, sometimes also branched and opposite, the lowermost an inch and a half in length, longer and farther asunder than any of the rest.

RACHIS having five angles, the fifth less perceptible than the others, bristly or hairy at the base of the spikes.

FLOWERS growing one way and turgid.

CALYX composed of three valves, the lowermost or third valve very small, receiving the floscule, *fig. 1.* the first and second equal, rib'd, pointed, hirsute, the one flat, the other gibbous. *fig. 2, 3. magnified.*

COROLLA composed of two valves, the valves equal, smooth, ovate, the one with its margin embracing the other, *fig. 4.* betwixt the valve of the calyx and the corolla a thin membrane is observable, which is sometimes notched, and sometimes pointed. *fig. 5, 6.*

STAMINA: three very slender and short FILAMENTS; ANTHERÆ forked and purplish. *fig. 7.*

PISTILLUM: GERMEN roundish; STYLES two, very short; STIGMATA feathered and purplish. *fig. 8.*

SEED rather large, shining, covered by the valves of the corolla, round on one side, and flat on the other, *fig. 9, 10.* taken from its covering. *fig. 11, 12, 13.*

Near the same spot where the *Panicum sanguinale* is found, this rare species also makes its appearance, a space of about twenty yards square was last autumn covered chiefly with this grass, and the *Panicum viride*; in other parts of the fields it more rarely occurs; being an annual it may vary its particular place of growth, but by a diligent search will probably always be found in some part of *Battersea Fields*; Mr. RAY mentions it as having been found between *Deptford* and *Greenwich* in Garden Ground, also in a lane by the *Neat-house Gardens Chelsea*, and by the rivulet side near *Petersfield, Hampshire*. He is surely mistaken in saying *aquosis delectatur*. Mr. HUDSON describes it as growing near *Martha's Chapel, Guildford*.

Botanists make two principal varieties of it, viz. one with awns, and another without; the latter, which is the state in which we have figured it, most frequently occurs; it varies also in its colour, being sometimes found with spikes of a purplish hue.

It has a very great affinity to the *Panicum Crus corvi*, a foreign grass, but is too singular to be mistaken for any *English* Panic.

Affording a large quantity of seeds of considerable magnitude, it is sought for with great avidity by sparrows and other small birds.



Panicum Crus Galli.

Angustifolium *Willd.*

ERIOPHORUM POLYSTACHION. MANY-HEADED COTTON-GRASS.

ERIOPHORUM. *Linn. Gen. Pl.* TRIANDRIA MONOGYNIA.

Glumæ paleaceæ, undique imbricatæ. *Cor.* o. *Sem.* 1. *Lanâ* longissimâ cinctum.

Raii Syn. Gen. 23. HERBÆ GRAMINIFOLIÆ NON CULMIFERÆ FLORE IMPERFECTO SEU STAMINEO.

ERIOPHORUM *polystachion* culmis teretibus, foliis planis, spicis pedunculatis. *Linn. Syst. Veg.* p. 87. *Sp. Pl.* p. 76. *Fl. Suec. n.* 49.

ERIOPHORUM foliis planis, spicis pendulis. *Haller Hist. n.* 1331.

LINAGROSTIS *polystachia*. *Scopoli Fl. Carn. n.* 66.

GRAMEN pratense tomentosum panicula sparsa. *C. B. Pin.* 4.

GRAMEN tomentarium. *Ger. emac.* 29.

GRAMEN junceum lanatum, vel juncus bombicinus vulgaris. *Park.* 1271. *Scheuchz. Agroft. ed.* *Haller p.* 306. *Vaill. Bot. Paris. t.* 16. *f.* 1, 2. *Raii Syn. p.* 433. Cotton-Grass.

Lightfoot Fl. Scot. p. 39.

Hudson Fl. Angl. ed. p. 21.

RADIX perennis, repens, fusca, seu castanei coloris, fibrillis plurimis albis, aut rubentibus instructa.

CULMUS sæpius solitarius, dodrantalis, seu pedalis, et ultra, erectus, teres, lævis, geniculis duobus parum extantibus plerumque notatus, vaginis foliorum per totam longitudinem tectus.

FOLIA *ima* marcida, castanea, brevia, lanceolata, striato-reticulata; *superiora* basi sua arcuè culmum amplectentia, lineas duas ad tres lata, spithamæa et ultra, sensim attenuata, sæpe præmorsa, hinc convexa, inde concava, glabra; *suprema* planiora, multo breviora, et manifeste carinata; *vaginæ* foliorum culmi, æquali ubique fere magnitudine, ubi folium exit paulo laxiores, et fissurâ membranâ impleta notatæ.

BRACTEÆ tres aut quatuor, longitudine inæquales, basi vaginantes, culmum terminant, e quarum sinibus spiculæ prodeunt.

SPICULÆ plerumque plures a duabus ad septem, ovatæ, immaturæ erectæ, per ætatem pendulæ.

CALYX: *spica* undique imbricata: squamis ovato-oblongis, plano-inflexis, membranaceis, laxis, acuminatis, flores distinguuntibus, *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA tria, capillaria: ANTHERÆ erectæ, oblongæ, *fig.* 2.

PISTILLUM: GERMEN minimum; STYLUS filiformis, longitudine squamæ calycis; STIGMATA tria, stylo longiora, reflexa, *fig.* 3.

PERICARPIUM nullum.

SEMEN triquetrum, acuminatum, nigrum, villis spicâ longioribus instructum, *fig.* 4, 5, 6, 7.

ROOT perennial, creeping, of a brown or chestnut colour, furnished with numerous white or reddish fibres.

STALK for the most part solitary, from nine inches to a foot or more in height, upright, round, smooth, for the most part furnished with two joints which project a little, covered throughout its whole length with the sheaths of the leaves.

LEAVES *next the root* withered, of a chestnut colour, short, lanceolate, striated, and marked with short transverse lines, which give them a reticulated appearance, the *succeeding leaves*, at their base closely embracing the stalk, from two to three lines in breadth, about seven inches or more in length, gradually tapering to the extremity, where they are often bit off, convex on one side, concave on the other, and smooth, the *uppermost leaves* flatter, much shorter, and manifestly keeled; *sheaths* of the leaves nearly of an equal thickness throughout, where a leaf goes off more loosely connected, and marked with a fissure filled by a membrane.

FLORAL-LEAVES three or four of unequal lengths, forming sheaths at bottom, terminate the stalk, from the alæ of which the spiculæ proceed.

SPICULÆ for the most part several, from two to seven, ovate, first upright, afterwards pendulous.

CALYX: a *spike* covered on all sides with imbricated squamæ, of an ovate-oblong shape, flat and bent in a little, membranous, loose, running out to a long point, distinguishing the flowers, *fig.* 1.

COROLLA wanting.

STAMINA: three FILAMENTS very fine; ANTHERÆ upright and oblong, *fig.* 2.

PISTILLUM: GERMEN very small; STYLE thread-shaped, the length of the scales of the calyx; STIGMATA three, longer than the style, turned back, *fig.* 3.

SEED-VESSEL none.

SEED three-cornered, pointed, black, furnished with hairs which are longer than the spike, *fig.* 4, 5, 6, 7.

The genus *Eriophorum* is in a particular manner distinguished from the other genera related to it, by the length of the hairs which envelope the seed; and which, when the seed is ripe, assume the appearance of cotton, whence its name of Cotton-Grass; this cotton is much longer, and produced in greater quantities in the *polystachion*, than in the *vaginatum*; and in Germany, and the more northern countries, has been manufactured into various articles of dress, paper, and wicks for candles. LINNÆUS, in his *Flora lapponica*, informs us, that in some parts of Sweden, the peasants stuff their pillows with it instead of feathers, but that in Lapland, where the plant is sufficiently plentiful, they do not apply it to any such purpose, the skin of the Rein-Deer forming the whole of their bed and its furniture.

In the spring, Cattle appear to be very fond of its leaves, as they are generally found cropt, this may arise from the scarcity of herbage at that season of the year, as the plant advances the stems are always left untouched; it is in moors and boggy ground only that this plant is found, and in such situations it is very plentiful; whole acres being often rendered white as snow by it in the months of June and July when in seed.

It flowers in April and May, and may be found in *Battersea-Meadows*.



Eriophorum polystachion.



Eriophorum

vaginatum.

ERIPHORUM VAGINATUM. SINGLE-HEADED COTTON-GRASS.

ERIPHORUM. *Linn. Gen. Pl.* TRIANDRIA MONOGYNIA. *Glumæ* paleaceæ, undique imbricatæ. *Cor.* o. *Sem.* 1. *Lanâ* longissimâ cinctum.

Raii Syn. Gen. 28. HERBÆ GRAMINIFOLIÆ NON CULMIFERÆ FLORE IMPERFECTO SEU STAMINEO.

ERIPHORUM *vaginatum* culmis vaginatis teretibus, spica scariosa. *Linn. Syst. Veg. p.* 87. *Sp. Pl. p.* 76. *Fl. Suec. n.* 50.

ERIPHORUM caule tereti, foliis caulinis vaginalibus, spica erecta, ovata. *Haller Hist. n.* 1332.

LINAGROSTIS *vaginata.* *Scopoli Fl. Carn. n.* 66.

JUNCUS alpinus, capitulo lanuginoso, seu schænolaguros. *Bauh. Pin.* 12. *Scheuzch Agrost. p.* 302. *t.* 7.

JUNCUS alpinus cum cauda leporina. *Bauh. Hist.* 2. 514.

GRAMEN juncoides lanatum alterum danicum. *Park.* 1271. *Raii Syn. p.* 436. Hares-Tail Rush.

Lightfoot Fl. Scot. p. 90.

Hudson Fl. Angl. ed. 2. p. 22.

The *Eriophorum vaginatum* is with us a much scarcer plant than the *polystachion*, but in some parts of Great-Britain, and in other countries, is equally common.

In its generic characters, excepting the shortness of its *pappus*, it agrees with the *polystachion*; it has therefore the same figures of reference to them; in its specific characters, it differs very obviously, its root is not creeping but more matted, and its leaves, which are much finer, are consequently more apt to grow in tufts; the vagina of the upper stem-leaf in particular is remarkably inflated, and it never produces more than one spike, which is upright.

It is found in similar situations to the other; on the boggy parts of Shirley-Common, near Croydon, I have found it in tolerable plenty; it flowers somewhat earlier than the *polystachion*, but produces its *pappus* about the same time.

Sheep are very fond of it, whence in Westmoreland they call it Moss-Crops. *Raii Syn. p.* 436.

HOLCUS LANATUS.

MEADOW SOFT-GRASS.

HOLCUS *Lin. Gen. Pl. POLYGAMIA MONOECIA.*

HERMAPHROD. *Cal.* Gluma 1 five 2 flora. *Cor.* Gluma aristata. *Stam.* 3. *Styli* 2. *Sem.* 1.

MASC. *Cal.* Gluma 2-valvis. *Cor.* o. *Stam.* 3.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

HOLCUS *lanatus* glumis bifloris villosis: flosculo hermaphrodito mutico; masculo arista recurva. *Lin. Syst. Vegetab.* p. 760. *Sp. Pl.* 1485. *Fl. Suec.* n. 917.

AVENA diantha, floribus ovatis; perfecto mutico, imperfecto aristato. *Haller. hist.* n. 1484.

HOLCUS *lanatus.* *Scopoli Fl. Carn.* n. 1238.

GRAMEN pratense paniculatum molle. *Baub. pin.* 2.

GRAMEN miliaceum pratense molle. *Pet. Conc. Gr.* 224. *Raii Syn.* p. 404. Soft-tufted Meadow-Grass.

Hudson. Fl. Angl. ed. 2. p. 440. *Lightfoot. Fl. Scot.* p. 631.

RADIX perennis, fibrosa, minime repens.

CULMI plures, bipedales, seu tripedales, raro ultra, erecti, quatuor communiter geniculis distincti, pubescentes, teretes, in quibusdam locis ad basin radicanes.

FOLIA pilis mollibus undique vestita, incana, tres lineas lata, plana, superne striata, inferne carinata; vagina lineis purpureis externe notata, interne nitida; membrana obtusa, externe pilosa, pilisque ciliata.

PANICULA primo spiciformis, mollis, laxus, rubellus, parum nutans, dein erecta, diffusa, albida.

SPICULÆ bifloræ, albidæ, villosulæ, versus apicem coloratæ.

CALYX: Gluma bivalvis, valvula exteriori majore, trinerve, interiore mucronata, minore carinata. *fig. 1. auct.*

FLOS FERTILIS.

COROLLA bivalvis, valvulæ teneræ, virides, nitidæ, muticæ, valvulæ exteriori majore. *fig. 2.*

STAMINA: FILAMENTA tria, capillaria; ANTHERÆ oblongæ, bifurcatæ, flavæ. *fig. 5.*

PISTILLUM: GERMEN obovatum; STYLI duo, ad basin usque ramosi. *fig. 6.*

SEMEN parvum, acuminatum, nitidum glumis corollæ tectum. *fig. 9. et valvulis calycis inclusum. fig. 8.*

FLOS STERILIS.

COROLLA bivalvis, valvulæ minores, exteriori aristata, arista e dorso valvulæ erumpente, longitudine valvulæ exterioris calycis. *fig. 3, 4.*

STAMINA ut in fertili. *fig. 5.*

PISTILLUM: Germen ut in fertili, sed multo minus; STYLI duo, subulati, simplices. *fig. 7.*

SEMEN minimum, abortivum.

ROOT perennial, fibrous, not at all creeping.

STALKS several, from two to three feet high, seldom higher, upright, generally furnished with four joints, downy, round, in some situation taking root at the bottom.

LEAVES covered on every part with soft hairs, which give them a greyish appearance, about three lines in breadth, flat, above striated, below keeled, the sheath marked externally with purple lines, internally shining; the membrane blunt, externally hairy, and edged with hairs.

PANICLE at first forms a kind of soft, loose, reddish spike, which droops a little, afterwards becomes upright, spreading and whitish.

SPICULÆ containing two flowers, whitish, somewhat villous, coloured towards the top.

CALYX: a Glume of two valves, the outer one largest, having three ribs, and terminating in a point, the inner one smaller and keeled. *fig. 1. magnif.*

FERTILE FLOWER.

COROLLA composed of two valves which are tender, green, shining, and pointless, the outer valve largest. *fig. 2.*

STAMINA: three capillary FILAMENTS; ANTHERÆ oblong, forked at each end, of a yellow colour. *fig. 5.*

PISTILLUM: GERMEN inversely ovate; STYLES two, branched quite down to the bottom. *fig. 6.*

SEED small, pointed, and shining, covered by the glumes of the corolla, *fig. 9.* and inclosed in the valves of the calyx. *fig. 8.*

BARREN FLOWER.

COROLLA composed of two valves, the valves small, the outer one bearded, the awn arising from the back of the valve, the length of the outer valves of the calyx. *fig. 3, 4.*

STAMINA as in the fertile flowers. *fig. 5.*

PISTILLUM: the Germen as in the fertile flower, but much less; STYLES two, tapering, and simple. *fig. 7.*

SEED very minute and abortive.

The *Holcus Lanatus* abounds in most meadows, is frequently found by road-sides, and sometimes on walls, so that it will thrive in almost any situation. The redness of its panicle when just opening, joined to the softness and hoariness of its leaves, render it a very conspicuous grass.

HALLER speaks highly of it as food for cattle, calling it *optimum pabulum*. We cannot coincide with him in this opinion, nor do the generality of our intelligent farmers and graziers, who condemn it as too soft and woolly; nevertheless the seed of it (being easily collected) is sometimes sent up to London in great quantities, and sold for pure grass-feed: but it were better to lay down ground for meadow or pasturage in the usual way, than fill it with this unprofitable, though pure grass-feed.

Mr. LIGHTFOOT informs us in his *Fl. Scot.* that it is sometimes used to make ropes for the fishing-boats.

It is a very distinct species from the *Holcus Mollis* (as we shall particularly explain when we treat of that grass), and flowers in June and July.

One cannot but lament that LINNÆUS should have separated the *Holcus* from the other grasses, with which it has so great an affinity, and have placed it among the plants of the class *Polygamia*, merely because some of its flowers were imperfect; it frequently happening, as HALLER very justly observes, that the *Triticum*, *Hordeum*, and several other grasses, are in the same predicament; and it was the less necessary here, as there is an evident pistillum in the barren flowers, though an imperfect one. *Vid. fig. 7.*



Holcus lanatus.

MILIUM EFFUSUM. MILLET GRASS.

MILIUM *Lin. Gen. Pl.* TRIANDRIA DIGYNIA.

Cal. 2-valvis, uniflorus: valvulis subæqualibus. *Corolla* brevissima. *Stigmata* penicilliformia.

Raii Syn. Gen. 27. HERBÆ GRAMINIFOLIÆ FLORE IMPERFECTO CULMIFERÆ.

MILIUM *effusum* floribus paniculatis dispersis muticis. *Lin. Syst. Veget.* p. 94. *Sp. Pl.* p. 90. *Fl. Suec.* n. 61.

MILIUM paniculis raris, longissime petiolatis. *Haller. Hist.* 1525.

GRAMEN fylvaticum, panicula miliacea sparfa. *Baub. Pin.* 8.

GRAMEN miliaceum. *Lob. icon.* 3. *Ger. emac.* 6. *I. B. II.* 462.

GRAMEN miliaceum vulgare. *Park.* 1153. *Raii Syn.* p. 402. Millet-grafs. *Lightfoot Fl. Scot.* p. 92.

RADIX perennis, repens.	ROOT perennial, and creeping.
CULMI tenues, tres, quatuorve pedes alti, quatuor communiter geniculis distincti, totidemque, vel quinis foliis a geniculis oriundis, vestiti.	STALKS slender, three or four feet high, commonly furnished with four joints, and cloathed with as many or five leaves, arising from the joints.
FOLIA palmaria, spithamæa, et pedalia, glabra, tenuia, et infirma, subtilissimè per longitudinem striata, supernâ et infernâ parte aspera, marginibus etiam, si deorsum stringantur, asperis donata, tres, quatuorve lineas lata, sensim in acutum mucronem terminata. <i>Vaginæ</i> striatæ, glabræ, ad internam foliorum basin in membranulam tenuem, plerumque laciniatam terminatæ.	LEAVES from four to seven inches or a foot in length, smooth, thin and weak, very finely striated through their whole length, the upper and under side as well as the edges rough if drawn backward through the hand, three or four lines in breadth, terminating gradually in a fine point. <i>Sheath</i> striated, smooth, at the inner base of the leaf terminating in a membrane which is often jagged.
PANICULA palmaris, frequentius tamen spithamæa, pedalis et longior quandoque, suberecta, diffusa, laxa.	PANICLE four inches in length, but more frequently a span, a foot, or more, nearly upright, spreading and loose.
RAMI paniculæ, capillares, flexuosi.	BRANCHES of the panicle very fine, and crooked.
CALYX: <i>Gluma</i> uniflora, bivalvis, acuminata, valvulis æqualibus, lævibus, ovatis, acutis. <i>fig.</i> 1. 2.	CALYX: a <i>Glume</i> of one flower, and two valves, pointed, the valves equal, smooth, ovate, and pointed. <i>fig.</i> 1. 2.
COROLLA bivalvis, calyce minor: valvulæ ovatæ, obtusiusculæ, altera minore. <i>fig.</i> 3. 4.	COROLLA composed of two valves, smaller than the calyx: the valves ovate, bluntish, one smaller than the other. <i>fig.</i> 3. 4.
STAMINA: FILAMENTA tria, capillaria, corollâ longiora. ANTHERÆ primo oblongæ, demum bifurcæ, flavæ. <i>fig.</i> 5.	STAMINA: three FILAMENTS, very fine, longer than the corolla. ANTHERÆ first oblong, then forked at each end, of a yellow colour. <i>fig.</i> 5.
PISTILLUM: GERMEN subrotundum, viride, glabrum; STYLI duo reflexi, plumosi, albi. <i>fig.</i> 6.	PISTILLUM: GERMEN roundish, green, smooth. STYLES two, turned back, feathered and white. <i>fig.</i> 6.
SEMEN unicum, tectum, subrotundum, nitidum. <i>fig.</i> 7.	SEED single, enclosed, roundish, and shining. <i>fig.</i> 7.

The grafs here figured is the only one we have of the genus *Milium*. It is distinguished from the *Panics*, to which it has the greatest natural affinity, by having a calyx of two valves only: the height it usually attains, the particular situation in which it is found, joined to the delicacy of its panicle, eminently distinguish it from all our other grasses.

It abounds in many of the woods about town, particularly in *Charlton Wood*, and flowers in *May* with the Lily of the Valley and Hare-bell.

It has a creeping root, and grows readily in a shady situation.



Milium effusum.



Scabiosa arvensis.

SCABIOSA ARVENSIS. FIELD SCABIOUS.

SCABIOSA *Lin. Gen. Pl.* TETRANDRIA MONOGYNIA.

Cal. communis polyphyllus; *proprius* duplex, superus. *Recept.* paleaceum five nudum.

Raii Syn. Gen. 8. HERBÆ FLORE COMPOSITO DISCOIDE, SEMINIBUS PAPPO DESTITUTIS, CORYMBIFERÆ DICTÆ.

SCABIOSA *arvensis* corollulis quadrifidis radiantibus, foliis pinnatifidis incisfis, caule hispido. *Lin. Syst. Vegetab.* p. 121. *Sp. Plant.* p. 143. *Fl. Suecic.* n. 117.

SCABIOSA foliis petiolatis, ovato-lanceolatis, dentatis, superioribus femipinnatis. *Haller Hist.* 206.

SCABIOSA *arvensis.* *Scopoli Fl. Carn.* n. 135.

SCABIOSA *pratensis* hirsuta quæ officinarum. *Bauh. pin.* 269.

SCABIOSA *major vulgaris.* *Ger. emac.* 719.

SCABIOSA *vulgaris pratensis.* *Parkinsf.* 484. *Raii Syn.* p. 191. Common Field Scabious. *Hudson. Fl. Angl. ed. II.* p. 62. *Lightfoot Fl. Scot.* p. 114. *Oeder Fl. Dan.* t. 447.

RADIX perennis, ramosa, sublignosa, difficulter evulsa.	ROOT perennial, branched, somewhat woody, with difficulty pulled up.
CAULIS pedalis vel ultra, teres, simplex feu ramosus, scaber, superne nudus, pubescens, inferne nigro punctatus, hispidus: pilis albidis.	STALK a foot or more in height, round, simple or branched, rough, above naked of leaves, and downy below, dotted with black and hispid: the hairs whitish.
FOLIA opposita, hispida, acuta, inferiora integra, ovali-oblonga, remote serrata; superiora sessilia, amplexicaulia, pinnatifida: laciniis linearibus, oppositis, subserratis; intermedia duplo majore, lanceolata, utrinque attenuata, in medio serrata.	LEAVES opposite, hispid, pointed; the lower ones entire, of an oval oblong shape, remotely serrated; the upper ones sessile, embracing the stalk, and pinnatifid; the segments linear, opposite, slightly serrated, the middle segment twice the size of the others, lanceolate, tapering at each extremity, and serrated in the middle.
FLORES terminales, longius pedunculati, solitarii.	FLOWERS terminal, standing on long foot-stalks.
CALYX communis polyphyllus, imbricatus, foliolis ovatis, acutis, pubescentibus, ciliatis, plano-patentibus; interioribus paulo minoribus.	CALYX common to all the florets composed of many leaves, imbricated, the leaves ovate, pointed, downy, edged with hairs, flat and spreading; the innermost somewhat the smallest.
COROLLA composita hemisphærica, dilute violacea, radiata; propria radii tubulata, longitudine calycis, intus villosa, quadrifida; laciniis erectis, oblongis, obtusis, inæqualibus; exteriore paulo majore; duabus lateralibus, oppositis, æqualibus; intima duplo minore, fig. 1; disci minor, ore quadrifido, obtuso, inæquali.	COROLLA compound, hemispherical, of a pale violet colour, radiate; the florets in the circumference tubular, the length of the calyx, villous within, divided into four segments which are upright, oblong, obtuse, and unequal; the outermost somewhat the largest; the two side ones opposite, and equal, the innermost twice as small, fig. 1.; the central florets smaller, the mouth divided into four, obtuse, unequal segments.
STAMINA: FILAMENTA quatuor, setacea, tubo corollæ inferne adnata, longitudine corollæ; ANTHERÆ exstantes, lineares, incumbentes, corollæ concolores, fig. 2.	STAMINA: FILAMENTS four, tapering, growing to the lower part of the tube of the corolla, and of the same length as the corolla. ANTHERÆ projecting, linear, incumbent, of the same colour as the corolla, fig. 2.
PISTILLUM: GERMEN inferum, tetragonum, villosu-hispidum, coronatum pappo campanulato, villosu-setaceo, cinereo. STYLUS cylindricus, superne incrassatus, corolla longior, erectus. STIGMA exsertum, clavatum, emarginatum, fig. 3.	PISTILLUM: GERMEN below the corolla, four-cornered, covered with numerous stiffish hairs, and crowned with a bell-shaped pappus formed of numerous ash-coloured bristles. STYLE cylindrical, thickened above, longer than the corolla, upright. STIGMA projecting, club-shaped, with a notch, fig. 3.
RECEPTACULUM barbatum, pilis germinibus brevioribus.	RECEPTACLE bearded, the hairs shorter than the germina.
SEMEN villosum, subtetragonum, pappo villosu-setaceo coronatum, fig. 4.	SEED villous, somewhat four-cornered, crowned with a bristly villous down or pappus, fig. 4.

The *Scabiosa arvensis* is a very common plant, both in Corn-Fields and Meadows. In the former it is undoubtedly a troublesome weed; in the latter it frequently forms a great part of the pasturage, and being a hardy plant, producing a large quantity of foliage, which is not refused, according to LINNÆUS's experiments, by Kine, Horses, or Sheep, it may perhaps be considered rather as useful.

Dr. RUTTY, in his *Materia Medica*, remarks, that the leaves have sometimes been described as inodorous and insipid; but, on a more accurate examination, they are found to be bitterish, with some degree of acrimony and astringency. Medicinally this species, as well as the *succisa*, has been recommended internally in Coughs, Asthmas, malignant Fevers, Lues venerea, Epilepsy, &c.; and externally in the Scurvy, Itch, Scabies, Tetters, &c.; and may be used in substance, infusion, decoction, or any manner of way; but, as Dr. LEWIS observes, the present practice has little dependence on it.

It flowers in July and August, varies much in the division of its leaves, and is sometimes found with white flowers. The blossoms, and indeed the whole plant is much larger than the *Scabiosa succisa*; its leaves are more jagged. It flowers much earlier, and it affects a drier situation.



Plantago media

PLANTAGO MEDIA. HOARY PLANTAIN.

PLANTAGO *Lin. Gen. Pl.* TETRANDRIA MONOGYNIA.

Cal. 4-fidus. *Cor.* 4-fida: limbo reflexo. *Stamina* longissima. *Caps*^s
2-locularis, circumscissa.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ FLORE TETRAPETALO ANOMALÆ.

PLANTAGO *media* foliis ovato-lanceolatis pubescentibus, spica cylindrica, scapo tereti. *Lin. Syst. Vegetab.* p. 131. *Sp. Pl.* p. 163. *Fl. Suec.* n. 130.

PLANTAGO foliis subhirsutis, ellipticis, spica cylindrica densa. *Haller. Hist.* n. 659.

PLANTAGO *media.* *Scopoli Fl. Carniol.* 162.

PLANTAGO latifolia incana. *Baubin. Pin.* 189.

PLANTAGO major incana. *Parkins.* 493.

PLANTAGO incana. *Ger. emac.* 419. *Raii Syn.* p. 314. Hoary Plantain, or Lamb's Tongue, *Hudson Fl. Angl. ed. 2.* p. 63. *Lightfoot Fl. Scot.* p. 117.

RADIX perennis, crassitie digiti aut pollicis, subconica, apice in crura aliquot divisa, extus nigricans, plurimis fibrillis instructa.

FOLIA ovata, brevissime petiolata, supra terram expansa, interioribus sensim minoribus, quinque-nervia, subrugosa, utrinque pubescentia, integerrima.

SCAPI plures, teretes, infra folia prodeuntes, spithamæi, aut pedales, erecti, pubescentes, pubesuperne erecta, adpressa.

SPICÆ florum cylindricæ, pollicares aut palmares.

BRACTEA, seu squamula lanceolata, concava, margine membranacea, singulo flosculo subjicitur, longitudine calycis.

CALYX: **PERIANTHIUM** quadripartitum, erectum, persistens; laciniis ovatis, acutiusculis, membranaceis, nervo viridi insignitis. *fig. 1.*

COROLLA monopetala, persistens, tabescens. *Tubus* cylindræus, basi globosus. *Limbus* quadripartitus, depressus, laciniis ovatis, acutis. *fig. 2.*

STAMINA: **FILAMENTA** quatuor, capillaria, erecto-patentia, calyce triplo longiora, purpurascencia. **ANTHERÆ** albæ, incumbentes, una extremitate bifida, altera mucronatâ. *fig. 3.*

PISTILLUM: **GERMEN** ovatum. **STYLUS** filiformis, pilosus, staminibus brevior. **STIGMA** simplex. *fig. 4.*

PERICARPIUM: **CAPSULA** ovalis, circumscissa, disperma. *fig. 6.*

SEMINA bina, hinc convexa, inde plano concava. *fig. 7.*

ROOT perennial, the thickness of one's finger or thumb, somewhat conic, dividing at the top into a few branches, externally of a blackish colour, and furnished with numerous fibres.

LEAVES ovate, standing on very short foot-stalks, expanded on the ground, the innermost gradually smallest, having five ribs, somewhat wrinkly, downy on both sides, and entire at the edges.

FLOWERING-STEMS several, round, proceeding from below the leaves, from seven inches to a foot in height, upright, downy, the hairs on the upper part of it upright, and pressed to the stalk.

SPIKES of the flowers cylindrical, from one to four inches in length.

FLORAL-LEAF, a floral-leaf or lanceolate small hollow scale, membranous at the edge, and of the length of the calyx, is placed under each floret.

CALYX: a **PERIANTHIUM** deeply divided into four segments, erect and permanent; the segments ovate, a little pointed, membranous, and marked with a green rib. *fig. 1.*

COROLLA monopetalous, permanent, withered. *Tube* cylindrical, with a globular base. *Limb* divided into four segments, which are pressed downwards, ovate and pointed. *fig. 2.*

STAMINA: four **FILAMENTS** very slender, somewhat spreading, thrice the length of the calyx, of a purplish colour. **ANTHERÆ** white, laying across the filaments, one end bifid, the other pointed. *fig. 3.*

PISTILLUM: **GERMEN** ovate. **STYLE** thread-shaped, hairy, shorter than the stamens. **STIGMA** simple. *fig. 4.*

SEED-VESSEL: an oval **CAPSULE**, dividing horizontally in the middle, and containing two seeds. *fig. 6.*

SEEDS two together, convex on one side, and plano-concave on the other. *fig. 7.*

This species of Plantain has a large root when fully grown, which penetrates deep into the earth, and being supplied with numerous lateral fibres, it supports itself in the most scorching seasons, when the plants around it are frequently burnt up. It is also one of those plants which are not destroyed by repeated mowing, as most lawns and grass plots sufficiently testify.

It may be distinguished from the common Plantain by the leaves being smaller, and hoary, standing on shorter foot-stalks, lying close to the ground, and having no notches on the edges; by its spikes being shorter, its filaments longer, its antheræ whiter and more showy, and, if any other difference were wanting, we might add, that its capsules, instead of many, contain only two seeds, as in the *lanceolata*.

About *London* it is not so common as either the *lanceolata* or *major*; but where the soil is chalky no plant occurs more frequently. It flowers from *June* to *August*.

Sheep, Goats, and Swine, eat it; Kine and Horses refuse it. *Lin. Pan. Suec.*

ASPERULA ODORATA. WOODRUFF.

ASPERULA *Lin. Gen. Pl.* TETRANDRIA MONOGYNIA.

Cor. 1-petala, infundibuliformis. *Semina* 2, globosa.

Raii Syn. Gen. 12. HERBÆ STELLATÆ.

ASPERULA *odorata* foliis octonis lanceolatis, florum fasciculis pedunculatis. *Lin. Syst. Vegetab.* p. 125. *Sp. Pl.* p. 150.

ASPERULA caule erecto, foliis octonis; petiolis ramosis erectis, feminibus hirsutis. *Haller. Hist.* n. 728.

GALIUM odoratum. *Scopoli Fl. Carn.* n. 158.

ASPERULA seu Rubeola montana odora. *Baub. Pin.* 334.

ASPERULA. *Ger. emac.* 966.

ASPERULA aut Aspergula odorata. *Parkins.* 563. *Raii Syn.* p. 225. Woodroof or Woodruffe. *Hudson Fl. Angl. ed. 2.* p. 66. *Lightfoot Fl. Scot.* p. 115. *Oeder Fl. Dan.* t. 562.

RADIX	perennis, tenuis, articulatus, flavescent, paulo infra terram repens, et plurimas fibrillas dimittens.	ROOT	perennial, slender, jointed, of a yellowish colour, creeping a little below the surface of the earth, and sending down numerous small fibres.
CAULIS	erectus, spithameus, plerumque simplex, tetragonus, quadrifurcatus, glaber.	STALK	upright, about a span in height, for the most part perfectly simple, four-cornered, with a groove on each side, and smooth.
FOLIA	plerumque octona, verticillata, lanceolata, mucronata, glabra, spinulis ciliata. <i>fig. 1.</i>	LEAVES	growing generally eight together in a whirl, lanceolate, terminating in a small point, smooth and edged with small spines. <i>fig. 1.</i>
CORYMBUS	terminalis, nudus, erectus.	CORYMBUS	terminal, naked, and upright.
CALYX	nullus.	CALYX	wanting.
COROLLA	monopetala, alba, infundibuliformis. <i>Tubus</i> brevis, germini infidens. <i>Limbus</i> quadripartitus, tubo longior, laciniis lanceolatis, patentibus, crassiusculis. <i>fig. 2.</i>	COROLLA	monopetalous, white, funnel-shaped. <i>Tube</i> short, fitting on the germen. <i>Limb</i> divided into four segments, longer than the tube, segments lanceolate, spreading, thickish. <i>fig. 2.</i>
STAMINA:	FILAMENTA quatuor, ad apicem tubi, brevissima, alba. ANTHERÆ albidæ, longitudine filamentorum, oblongæ, sublineares, incumbentes. <i>fig. 3.</i>	STAMINA:	four FILAMENTS at the top of the tube, very short and white. ANTHERÆ whitish, the length of the filaments, oblong, somewhat linear and incumbent. <i>fig. 3.</i>
PISTILLUM:	GERMEN inferum, viride, subrotundum, utrinque compressum, obsolete didymum, hispidum. STYLUS filiformis, albus, bifidus, antheris brevior. STIGMATA duo, globosa, inæqualia. <i>fig. 4, 5, 6.</i>	PISTILLUM:	GERMEN placed beneath the corolla, of a green colour, roundish, flattened on both sides, obscurely double, and hispid. STYLE filiform, white, bifid, shorter than the antheræ. STIGMATA two, globular and unequal. <i>fig. 4, 5, 6.</i>
NECTARIUM:	Glandula parva basin styli cingens.	NECTARY:	a small Gland surrounding the base of the style.
PERICARPIUM:	Baccæ duæ, siccæ, globosæ, coalitæ, hispidæ. <i>fig. 7.</i>	SEED-VESSEL:	two, dry, round, hispid berries united together. <i>fig. 7.</i>
SEMINA	folitaria, subrotunda, magna. <i>fig. 8.</i>	SEEDS	single, large and roundish. <i>fig. 8.</i>

The flowers of *Woodruff* have an agreeable smell, and the whole plant, when dried, diffuses an odour like that of the *sweet-scented Vernal-grass*. Kept among cloaths, it not only imparts to them an agreeable perfume, but, according to LINNÆUS, preserves them from insects.

RAY informs us, that it gives its flavour to vinous liquors; and that the Germans use it much for that purpose.

As a medicinal plant, it is supposed to attenuate viscid humours, and strengthen the tone of the Bowels, whence it is recommended in obstructions of the liver and biliary ducts, and by some in Epilepsies and Palsies: modern practice has nevertheless rejected it.

It is common in the woods about *London*, especially *Charlton Wood*; and flowers in *May* and *June*.



Asperula odorata.



Cynoglossum officinale.

CYNOGLOSSUM OFFICINALE. HOUNDSTONGUE.

CYNOGLOSSUM *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. infundibuliformis, fauce clausa fornicibus. *Stamina* depressa interiore tantum latere stylo affixa.

Raii Syn. Gen. 13. HERBÆ ASPERIFOLIÆ.

CYNOGLOSSUM *officinale* staminibus corolla brevioribus, foliis lato lanceolatis tomentosis sessilibus. *Lin. Syst. Vegetab.* p. 157. *Sp. Pl.* p. 192. *Fl. Suec.* n. 58.

CYNOGLOSSUM foliis ellipticis, lanceolatis, sericeis, caule folioso. *Haller. Hist.* n. 587.

CYNOGLOSSUM *officinale.* *Scopoli Fl. Carniol.* 191.

CYNOGLOSSUM majus vulgare. *Baubin. Pin.* 257. *Ger. emac.* 804. *Parkins.* 511. Great Houndstongue. *Raii Syn. ed.* 3. p. 226. *Hudson Fl. Angl. ed.* 2. p. 80. *Lightfoot Fl. Scot.* p. 133.

RADIX biennis, crassitie digiti feu pollicis, pedalis et ultra, fusiformis, foris nigricans, intus albida.

CAULIS bi feu tripedalis, erectus, sulcato-angulatus, villosus, foliosissimus, superne ramosus; *Rami* plurimi, suberecti, villosi.

FOLIA radicalia magna, pedalia et ultra, petiolata, ovata, acuta, sericea hirsutie incana, venosa, caulina, saltem superiora sessilia, conferta, sparsa, erecta, lanceolata, basi latiora.

FLORES primo fordide rubentes, demum cærulescentes, racemosi, secundi.

PEDUNCULI teretes, alterni, pubescentes.

CALYX: PERIANTHIUM quinquepartitum, foliolis ovato-lanceolatis, erectis, pubescentibus, obtusiusculis, interne nitidis. *fig. 1.*

COROLLA: monopetala, infundibuliformis; *Tubus* cylindraceus, crassius, pallidus, calyce duplo brevior; *Limbus* concavus, quinquefidus, laciniis rotundatis. *fig. 2, 3.*

NECTARIUM: *Squamæ* quinque, purpureæ, antice concaviusculæ, vertice gibbæ, obtusæ, margini tubi insertæ, limbo duplo breviores, conniventes. *fig. 4.* *Faux* corollæ perforata.

STAMINA: FILAMENTA quinque, brevissima; *ANTHERÆ* oblongæ, virides, sub squamis nectareis reconditæ. *fig. 5.*

PISTILLUM: GERMINA quatuor, e luteo-virescentia, glabra; *STYLUS* subulatus longitudine staminum, persistens; *STIGMA* obtusum, emarginatum. *fig. 6.*

PERICARPIUM: CAPSULA quatuor depressæ, subrotundæ, scabræ, non dehiscentes, apice affixæ. *fig. 7.*

SEMINA solitaria, subovata, gibba, acuminata, glabra. *fig. 8.*

ROOT biennial, the thickness of the finger or thumb, a foot or more in length, tapering, blackish on the outside, and whitish within.

STALK two or three feet in height, upright, grooved or angular, villous, very leafy, branched at top; *Branches* numerous, nearly upright and villous.

LEAVES proceeding from the root large, a foot or more in length, standing on footstalks, ovate, pointed, covered with a silky down which gives them a greyish colour, veiny, those of the stalk at least the uppermost ones sessile, numerous, placed irregularly on the stalk, upright, lanceolate, and broadest at the base.

FLOWERS at first of a dull red colour, afterwards becoming blueish, growing in racemi or long bunches, and hanging all one way.

RACEMI nearly upright, and generally naked.

FLOWER-STALKS round, alternate, and downy.

CALYX: PERIANTHIUM deeply divided into five segments, the leaves ovato-lanceolate, upright, downy, bluntish, shining on the inside. *fig. 1.*

COROLLA monopetalous, funnel-shaped, *Tube* cylindrical, thick, of a pale colour, half the length of the calyx. *LIMB* concave, divided into five roundish segments. *fig. 2, 3.*

NECTARY: five purple *Scales*, anteriorly hollow, gibbous at top, blunt, inserted into the edge of the tube, half the length of the limb, closing together. *fig. 4.* *Mouth* of the corolla perforated.

STAMINA: five *FILAMENTS*, very short. *ANTHERÆ* oblong, green, hid under the scaly nectaries. *fig. 5.*

PISTILLUM: GERMINA four, of a yellowish green colour, smooth. *STYLE* tapering, the length of the stamina, permanent. *STIGMA* blunt and nicked. *fig. 6.*

SEED-VESSEL: four flat *CAPSULES* of a roundish shape, somewhat prickly, not opening, fixed by their points. *fig. 7.*

SEEDS single, somewhat ovate, gibbous, pointed and smooth. *fig. 8.*

The leaves of this plant are in shape thought to resemble a Dog's-tongue, whence its name.

It grows wild by road sides, and in uncultivated places; and is particularly common about *Charlton*, and in the road to *Lewisham*.

It flowers in *June* and *July*, and ripens its seeds in *August* and *September*.

The whole plant has a disagreeable smell, much resembling that of mice. Its effects are said to be narcotic; and an instance is related in the *Hist. Oxon.* 3. 450*, in which the leaves boiled by mistake for those of Comfrey, disordered a whole family, and proved fatal to one. *BARON HALLER* quotes *Dr. BLAIR* as describing a case somewhat similar; but in that instance the plant used was not the *Cynoglossum*, but the *Pulmonaria maritima*†; a plant one would not suspect of being poisonous.

Houndstongue has been used in medicine both internally and externally; but the present practice takes no notice of it in any intention.

Cattle in general dislike it; but the Goat, who with impunity will eat Deadly Nightshade and Tobacco, is said sometimes to crop this nauseous plant; it is the natural food of the caterpillar of the scarlet tyger-moth (*Phalæna Dommula*) which may be found on it in April and May.

The *Cynoglossum minus folio virente* *Ger. emac.* 805, is considered by *LINNÆUS* merely as a variety of this plant, and described by *RAY* as growing in the *London* road between *Kelvedon* and *Witbam* in *Essex*, but more plentifully about *Braxsted* by the way sides. It has also been observed in some shady lanes about *Worcester* by *Mr. Pitts*; at *Southend*, by *Eltham*, plentifully, *Mr. J. Sherard*; by the road side, about a mile beyond *Waltham-abbey*, towards *Harlow*, *Mr. Newton*; At *Norbury* in *Surrey*, a mile from *Leatherhead*, plentifully. *Merr. Pin.*

* "Mulier quædam Oxoniensis, et maritus cum liberis, et quotquot erant istius familiæ, folia Cynoglossi (pro tenellis Symphyti foliis collecta) coctæ, libere comedebant; et prandio mox omnes ægrè se habebant, et non multo post vomitus molestus insequabatur, deinde stupore et somno correpti sunt, nec post horas fere 40 penitus excitati; unus autem mortuus est."

† *Blair's Miscellaneous Observations*, p. 55.



Menyanthes trifoliata.

MENYANTHES TRIFOLIATA. BUCKBEAN.

MENYANTHES *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Corolla hirsuta. Stigma 2-fidum. Caps. 1-locularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI, FLORE MONOPETALO.

MENYANTHES *trifoliata* foliis ternatis. *Lin. Syst. Vegetab.* p. 164. *Sp. Pl.* 208. *Fl. Suec.* n. 173. *Fl. Lappon.* p. 50.

MENYANTHES foliis ternatis. *Haller Hist.* n. 633.

MENYANTHES *trifoliata.* *Scopoli Fl. Carn.* n. 212.

TRIFOLIUM palustre. *Bauh. Pin.* 327.

TRIFOLIUM paludosum. *Ger. emac.* 1194. *Parkin.* 1212.

TRIFOLIUM fibrinum *Tabern. et Germanorum.* *Raii Syn.* p. 285. Marsh-Trefoil, Buckbeans. *Hudson Fl. Angl. ed. 2.* p. 85. *Lightfoot Fl. Scot.* p. 137. *Oeder Fl. Dan.* 541.

RADIX perennis, repens, longa, geniculata, fibrosa.
CAULIS procumbens, variæ longitudinis pro ratione loci, vaginis tectus.

FOLIA petiolata, ternata, ovata, obtusa, utrinque glabra, venosa, margine repanda.

PETIOLI teretes, striati, basi vaginati.

SCAPUS simplex, nudus, e vaginis foliorum natus, erectus, teres, glaber, foliis longior.

THYRSUS terminalis, subpyramidalis, nudus.
BRACTEÆ ovatæ, acutiusculæ, concavæ.

CALYX: PERIANTHIUM monophyllum, quinque partitum, basi rugosum, laciniis erectis, oblongis, obtusis, lævibus, margine coloratis. *fig. 1.*

COROLLA monopetala, campanulato-infundibuliformis, extus rosea, intus alba; *Tubus* crassus, calyce longior, quinque-fulcatus; *Limbus* quinque-partitus, laciniis ovato-lanceolatis, acutiusculis, reflexo-patentibus, intus barbatis, apicibus nudis, barbâ longitudine calycis, filamentosa, alba. *fig. 2.*

STAMINA: FILAMENTA quinque, subulata, alba, corollæ tubo adnata; ANTHERÆ purpurascens, sagittatæ, apicibus incurvis; POLLEN flavum. *fig. 3.*

PISTILLUM: GERMEN ovatum, viride, nitidum; STYLUS cylindricus, superne paululum incrassatus, staminibus duplo longior; STIGMA bilabiatum, flavum, villosum. *fig. 4.*

ROOT perennial, creeping, long, jointed and fibrous.
STALK procumbent, various in its length, according to its situation, covered by the sheaths of the leaves.

LEAVES standing on foot-stalks, growing three together, ovate, obtuse, smooth on both sides, veiny, the edge waved or serpentine.

LEAF-STALKS round, striated, forming a sheath at the bottom.

SCAPUS, or flowering stem, simple, naked, arising from the sheaths of the leaves, upright, round, smooth, longer than the leaves.

THYRSUS terminal, somewhat pyramidal, naked.

FLORAL-LEAVES ovate, somewhat pointed and hollow.

CALYX: a PERIANTHIUM of one leaf, deeply divided into five segments, at bottom wrinkly, the segments upright, oblong, obtuse, smooth, and coloured on the edge. *fig. 1.*

COROLLA monopetalous, betwixt bell and funnel-shaped, externally of a rose colour, internally white; *Tube* thick, longer than the calyx, having five grooves; *Limb* divided into five segments, which are narrow and pointed, spreading and turned back, bearded on the inside, the tips naked, beard the length of the calyx, thready and white. *fig. 2.*

STAMINA: five FILAMENTS, tapering, white, growing to the tube of the corolla; ANTHERÆ purplish, arrow-shaped, the tips bending in; POLLEN yellow. *fig. 3.*

PISTILLUM: GERMEN ovate, green, shining; STYLE cylindrical, above a little thickened, twice the length of the stamens; STIGMA composed of two lips, green and villous. *fig. 4.*

PARKINSON informs us, that in his time this plant was generally called by the name of *Marsh-trefoil*, and sometimes *Marsh-claver*; it is now generally known by the name of *Buckbean*, whether this be a corruption of the compound word *Bog-bean*, or of the low Dutch *Boex boonen*, hoc est *Phaseolum hircinum*, or whether it be an original English word we shall not presume to determine, it being a point on which the learned themselves are not agreed; but there is one point in which all who have seen the Buckbean in perfection will at once agree, viz. that it is one of the most beautiful plants this country can boast, nor does it suffer when compared with the *Kalmia's*, the *Rhododendron's*, and the *Erica's* of foreign climes, which are purchased at an extravagant price, and kept up with much pains and expence, while this delicate native, which might be procured without any expence, and cultivated without any trouble, blossoms unseen, and wastes its beauty in the desert air.

It grows abundantly in most boggy meadows, it will also flourish in ponds and lakes, and may be found in *Battersea Meadows*, particularly about a hundred yards distant from the *Red House* towards *Chelsea*, also plentifully in the marshes about the island of *St. Helena*, near *Rotherhithe*, and no where in greater plenty than in the marshes about *Staines*, in many of which it is the principal plant. It flowers in May and June.

To

To such as wish to have this plant flower with them in perfection, I would recommend the following mode of cultivation : collect the roots of the plant either in spring or autumn, put them in a large pot (having a hole at the bottom) filled with bog earth, immerse the pot about two-thirds of its depth in water, in which it should continue ; the advantage of this method is, that when the plant is coming into flower it may be brought into any room and placed in a pan of water, where it will continue to blossom for two or three weeks. A single root which I treated in this manner, planted in the spring, produced the ensuing May eight flowering stems, many of which had fifteen or sixteen blossoms on them.

LINNÆUS, in his invaluable *Flora Lapponica*, has several curious observations on the Buckbean, he informs us that the inhabitants of *some parts of Lapland*, and also of *Westrobothnia*, draw out the roots, which grow plentifully in the rivulets, and for want of other fodder give them to their cattle, who consume them entirely ; also that, in times of severe scarcity, the miserable inhabitants mix the powder of the dried roots with a small quantity of meal and convert them into bread, which, he observes, is very bitter and extremely nauseous ; that it was a general practice with the peasants of *Westrogothia*, in brewing, to substitute the bitter leaves of this plant for the hop, and that they were equally efficacious in preventing the beer from becoming sour ;—he concludes his remarks by observing, that BARTHOLIN, SIMON PAULI, and others, have exclaimed much on the scurvy of the northern regions, arising from cold, and of the profusion of antiscorbutic plants to be met with in those countries, among which they enumerate the Buckbean as a principal one ; LINNÆUS however asserts, that out of the great number of Laplanders he had seen not one was affected with that disease, although they lived in the coldest habitable climate, and used no vegetable for their ordinary food, not even bread. On the contrary, he had observed the scurvy to be one of the most common diseases of those who inhabited the countries adjacent.

Many physicians have a high opinion of its medical virtues.

“ It is of subtle penetrating parts, a good *diuretic* and *antiscorbutic*, whence it is also of great use to people afflicted with *rheumatic pains*. An *infusion* of the dried leaves may either be drank like tea, or they may be infused in white wine. It is a very intense *bitter*, and at first not very agreeable. *Dr. Deering Cat. Stirp.*

“ Marsh-trefoil is an efficacious aperient and deobstruent, promotes the fluid secretions, and, if liberally taken, gently loosens the belly. It has of late gained great reputation in scorbutic and scrophulous disorders ; and its good effects in these cases have been warranted by experience ; inveterate cutaneous diseases have been removed by an infusion of the leaves drank to the quantity of a pint a day, at proper intervals, and continued some weeks.” *Lewis's Disp.* p. 242.

It is also extolled for its efficacy in removing a variety of other diseases, as the periodical head-ach, asthma, protracted intermittents, jaundice, dropsy, wandering gout, worms, &c.—but we forbear saying more of it on this head, lest its real virtues should be called in question.

Dr. TANCRED ROBINSON asserts, that sheep are cured of the rot by being driven to feed in marshes where this plant abounds ; this, if true, would prove a most valuable discovery.

SYMPHYTUM OFFICINALE. COMFREY.

SYMPHYTUM *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Corollæ limbus tubulato ventricosus : fauce clausa radiis subulatis.

Raii Syn. Gen. 13. HERBÆ ASPERIFOLIÆ.

SYMPHYTUM *officinale* foliis ovato-lanceolatis decurrentibus. *Lin. Syst. Vegetab.* p. 158. *Sp. Pl.* 195. *Fl. Suec.* n. 165.

SYMPHYTUM *Haller. Hist.* n. 600.

SYMPHYTUM *Scopoli Fl. Carn.* n. 195.

SYMPHYTUM *Consolida major.* *Baub. pin.* 259.

CONSOLIDA *major.* *Gerard emac.* 806.

SYMPHYTUM *majus vulgare.* *Parkinson* 523. *Raii Syn.* p. 230. *Comfrey.* *Hudson. Fl. Angl.* ed. 2. p. 81. *Lightfoot Fl. Scot.* p. 134.

RADIX	perennis; magna, ramosa, extus nigricans, intus alba, subdulcenti-insipida, succo tenaci glutinoso abundans.	ROOT	perennial, large, branched, on the outside blackish, white within, mawkish, abounding with a slimy juice.
CAULIS	bipedalis; erectus, ramosus, teres, subangulatus, scaber; pube rigida, recurva.	STALK	about two feet high, upright, branched, round, yet slightly angular, rough; the hairs rigid and bending backwards.
FOLIA	alterna, inferne petiolata, superne sessilia, decurrentia, ovata, acuta, spithamæa, etiam pedalia, parum rugosa, venosa, utrinque scabra, margine subundulata, ciliata.	LEAVES	alternate, the lower ones standing on footstalks, the upper ones sessile, decurrent, ovate, pointed, seven inches, or even a foot in length, somewhat wrinkly, veined, rough on both sides, the edges slightly waved, and fringed with hairs.
FLORES	ex albo-lutescentes, raro purpurei, cernui, racemosi, racemis plerumque geminis, involutis, multifloris.	FLOWERS	of a yellowish white colour, rarely purple, drooping, placed on racemi or branches, which usually grow two together, turn spirally inwards, and support many flowers.
PEDUNCULI	racemorum & florum teretes, hirsuti.	PEDUNCLES	both of the racemi and flowers, round and very hairy.
CALYX: PERIANTHIUM	monophyllum, villosum, profunde quinquefidum: laciniis lanceolatis acutis, carinatis, erectis. <i>fig. 1.</i>	CALYX:	a PERIANTHIUM of one leaf, hairy, deeply divided into five segments, which are lanceolate, keel'd and upright. <i>fig. 1.</i>
COROLLA	infundibuliformis, ex luteo-alba, decidua; <i>Tubus</i> crassius, longitudine calycis, apice extus notatus punctis quinque depressis, <i>fig. 2;</i> <i>limbus</i> ovatus, e tubo sensim ampliato, minutim quinquefidus, laciniis brevibus, rotundatis, revolutis; <i>faux</i> clausa: squamis nectareis quinque lanceolatis, acutis, margine crassis, ferrulato-dentatis, conniventibus, corollâ brevioribus. <i>fig. 4, 5.</i>	COROLLA	funnel-shaped, of a yellowish white colour, deciduous; the <i>tube</i> thick, the length of the calyx, marked externally at the top with five small depressions; <i>fig. 2.</i> the <i>limb</i> ovate from the gradual widening of the tube, divided into five short roundish segments, which are rolled back; the <i>mouth</i> closed with five long and pointed nectaries, thick at the edge, with numerous teeth-like points, closing at top, shorter than the corolla. <i>fig. 4, 5.</i>
STAMINA: FILAMENTA	quinque, lanceolata, alba, breviuscula; ANTHERÆ oblongæ, apice et basi bifidæ, lutescentes, erectæ, sub squamis nectareis occultatæ. <i>fig. 3.</i>	STAMINA:	five, lanceolate, white, shortish FILAMENTS; ANTHERÆ oblong, bifid both at top and at bottom, of a yellowish colour, upright, hid by the nectaries. <i>fig. 3.</i>
PISTILLUM: GERMEN	quadripartitum: lobis subrotundis, obtusis, viridibus; STYLUS subulatus, albus, inter lobos germinis surgens, corollâ paulo longior, apice obliquus; STIGMA parvum, obtusum. <i>fig. 6.</i>	PISTILLUM: GERMEN	divided into four lobes, which are roundish, blunt and green; STYLE tapering, white, arising from the middle betwixt the lobes, a little longer than the corolla, with a small obliquity at top; STIGMA small and blunt. <i>fig. 6.</i>
SEMINA	quatuor in fundo calycis, majuscula, angulata, nigricantia, nitida. <i>fig. 7.</i>	SEEDS	four, in the bottom of the calyx, largish, angular, blackish and shining. <i>fig. 7.</i>

The *Comfrey* is a very common plant by river sides, on the edges of wet ditches, and in other moist situations; it flowers from June to September.

Its blossoms are for the most part of a yellowish white colour, but in some parts of *England*, and abroad, they are more commonly purple.

As a medicinal plant the *Comfrey* has been held in high estimation, its consolidating virtues have however been carried to a ridiculous excess; the roots, which are full of a glutinous juice, agree in quality with the roots of Marsh-mallow, and hence are recommended, internally, in spittings of blood, purgings, fluxes, and ulcers of the bladder; externally, by way of poultice to fresh wounds, fractured bones, bad ulcers, bruises, gouty swellings, &c.

A decoction of the powdered root, prepared in a particular manner, yields a fine scarlet colour. *HELLOT teinture*, p. 357.

It is generally left untouched by cattle. I know of no plant, that on being repeatedly cut down, produces such a quantity of herbage.



Symphytum officinale.

VINCA MAJOR. GREAT PERIWINKLE.

VINCA. *Linn. Gen. Pl.* PENTANDRIA MONOGYNIA.

Contorta. *Folliculi* 2, erecti, *Semina* nuda.

Raii Syn. Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

VINCA major caulibus erectis, foliis ovatis, floribus pedunculatis. *Linn. Syst. Veg.* p. 304.

PERVINCA caulibus erectis, foliis ovato-lanceolatis ciliatis, petiolis unifloris. *Haller Hist.* n. 573.

PERVINCA major. *Scopoli Fl. Carn.* n. 174.

CLEMATIS daphnoides major. *Baub. Pin.* 302.

CLEMATIS daphnoides f. Pervinca major. *Ger. emac.* 894.

CLEMATIS daphnoides latifolia, f. Pervinca major. *Park.* 380. *Raii Syn.* p. 268. The greater Periwinkle. *Hudson Fl. Angl. ed.* p. 91.

RADIX perennis, fibrosa, fibris albidis seu fuscis.

CAULES florigeri erecti, bipedales et ultra, teretes, lateribus alterne subcompressis, glabri, rubro maculati, cauliculi etiam sunt steriles qui humi repent aut plantas vicinas scandent.

FOLIA opposita, petiolata, ovata, glaberrima, minutim ciliata, remota, sempervirentia.

PEDUNCULI foliis longiores, erecti, teretes, glabri, filiformes, uniflori.

FLORES ampli, pallide cærulei.

CALYX: PERIANTHIUM quinquepartitum, laciniis sublinearibus, ciliatis, longitudine fere tubi corollæ, *fig.* 1.

COROLLA monopetala, hypocrateriformis, tubus inferne cylindraceus, superne latior, lineis quinque insculptus, ore pentagono, albido, limbus horizontalis, quinquepartitus, laciniis extrorsum latioribus, oblique truncatis, *fig.* 2.

STAMINA: FILAMENTA quinque, brevissima, inflexa, retroflexa; ANTHERÆ biloculares, introrsum dehiscentes, membranâ pilosâ incurva terminatæ, *fig.* 3.

PISTILLUM: GERMINA duo, compressa glandulis duabus nitidis liquorem melleum copiose effundentibus; STYLUS utrique unus communis, ad basin sensim gracilescens; STIGMATA duo, inferius orbiculatum, planum, superius albissimum, pilosum, membranâ antherarum obtectæ, *fig.* 4.

ROOT perennial and fibrous, the fibres whitish or of a brown colour.

STALKS producing the flowers upright, two feet high and upwards, round, the sides alternately somewhat flattened, smooth, dotted with red, there are also other stalks producing no flowers, which creep on the ground or climb the neighbouring plants.

LEAVES opposite, standing on foot-stalks, ovate, smooth, shining, finely edged with hairs, remote from each other, and evergreen.

FLOWER-STALKS longer than the leaves, upright, round, smooth, filiform, each supporting one flower.

FLOWERS large, of a pale blue colour.

CALYX: a PERIANTHIUM divided into five segments, the segments somewhat linear, ciliated, almost the length of the tube of the corolla, *fig.* 1.

COROLLA monopetalous, salver-shaped, the tube below cylindrical, above broader, having five grooves, the mouth whitish, five cornered, the limb horizontal, divided into five segments, which are externally broadest, and obliquely cut off, *fig.* 2.

STAMINA: five FILAMENTS, very short, first bent in, and afterwards bent back; ANTHERÆ bilocular, opening inwardly, terminated by a hairy membrane bent in at top, *fig.* 3.

PISTILLUM: GERMINA two, pressed by two shining glands which pour forth plentifully a sweet liquor; STYLE one common to both, gradually tapering to the base; STIGMATA two, the lowermost round and flat, the uppermost very hairy, covered by the membrane of the antheræ, *fig.* 4.

In the *Systema Vegetabilium* of LINNÆUS, the last of his works published under his direction, this plant is suspected to be a variety of the *Vinca minor*, a suspicion for which there appears to be no grounds, and which is contrary to the united opinion of Botanists both ancient and modern; the *minor* it is true has many varieties, but they relate to the colour of the blossoms, and leaves, and the multiplication of the former merely; no alteration is produced in the general habit of the plant, not even by long continued culture; HALLER, in his specific character of the *major*, observes, that the leaves are finely edged with hairs; so far as our observation extends this is constant, and may serve, if any difficulty of distinguishing them should arise, to settle it.

The *major*, like the *minor*, is common enough with us in gardens, but rarely met with wild, yet I have noticed it in several places, particularly under Lord STORMONT's park pales, on the left-hand side of the road betwixt Wandsworth and Putney-Common, and in a field near Beckenham, in Kent, where it was certainly in a wild state.

It flowers in May and June.

It is regarded only as an ornamental plant, but should be introduced into the garden with caution, as it increases very much, and is apt to over-run and injure others.



SAMOLUS VALERANDI. ROUND-LEAVED WATER-PIMPERNEL.

SAMOLUS *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. hypocrateriformis. *Stamina* munita squamulis corollæ. *Caps.* unilocularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

SAMOLUS *Valerandi.* *Lin. Syst. Vegetab.* p. 177. *Sp. Pl.* p. 243. *Fl. Suec.* n. 192.

SAMOLUS. *Haller Hist.* n. 707.

ANAGALLIS aquatica, rotundo folio non crenato. *Bauhin Pin.* 252.

SAMOLUS *Valerandi.* *Bauh. Hist.* 3. p. 791.

ALSINE aquatica, foliis rotundis becabungæ. *Morif. Hist.* 2. p. 323. f. 3. t. 24. f. 28.

ANAGALLIS aquatica rotundifolia. *Ger. emac.* 620.

ANAGALLIS aquatica tertia *Lobelii* folio subrotundo non crenato. *Parkin.* p. 1237. *Raii Syn.* 283. Round-Leaved Water-Pimpernel. *Hudson Fl. Angl. ed. 2.* p. 94. *Lightfoot Fl. Scot.* p. 142. *Oeder Fl. Dan. icon.* 198.

RADIX perennis, fibrosa, alba.

CAULIS dodrantalis, aut pedalis, erectus, rigidulus, teres, glaber, plerumque ramosus.

FOLIA alterna, petiolata, ovata, obtusa, integerrima, nitida, venis paucis, remotis, notata.

PETIOLI breves, lati.

FLORES parvi, albi, spicati.

PEDUNCULI plurimi, sparsi, suberecti, uniflori, teretes, bractæ lanceolatæ medio instructi.

CALYX: PERIANTHIUM quinque-partitum, superum, basi obtusum, laciniis erectis, persistentibus, fig. 1.

COROLLA monopetala, hypocrateriformis. *Tubus* brevissimus, longitudine calycis, patulus. *Limbus* planus, quinque-partitus, obtusus. *Squamulæ* quinque, brevissimæ, ad basin finis limbi, conniventes, fig. 2, 3.

STAMINA: FILAMENTA quinque, brevia, infra laciniam corollæ singula. ANTHERÆ conniventes, luteæ, intra tubum corollæ, fig. 4.

PISTILLUM: GERMEN inferum. STYLUS filiformis, longitudine fere flaminum. STIGMA capitatum, fig. 5.

PERICARPIUM: CAPSULA subrotunda, calyce cincta, unilocularis, ore quinquedentato, dentibus reflexis, fig. 6.

SEMINA plurima, exigua, nigra. RECEPTACULUM globosum, magnum, fig. 7, 8.

ROOT perennial, fibrous, and white.

STALK a span or a foot in height, upright, somewhat rigid, round, smooth, and generally branched.

LEAVES alternate, standing on foot-stalks, ovate, obtuse, perfectly entire, shining, marked with few veins, and those distant.

LEAF-STALKS short, and broad.

FLOWERS small, white, growing in spikes.

FLOWER-STALKS numerous, placed in no regular order, nearly upright, each supporting one flower, round, having a small pointed floral leaf growing from the middle of each.

CALYX: a PERIANTHIUM deeply divided into five segments, placed above the germen, blunt at the base, the segments upright and permanent, fig. 1.

COROLLA monopetalous, falver-shaped. *Tube* very short, the length of the calyx, open. *Limb* flat, deeply divided into five segments, which are obtuse; five very short *Scales* which close inward, are situated at the mouth of this tube, fig. 2, 3.

STAMINA: five short FILAMENTS placed beneath each segment of the corolla. ANTHERÆ closing together, of a yellow colour, within the tube of the corolla, fig. 4.

PISTILLUM: GERMEN beneath the calyx. STYLE thread-shaped, nearly the length of the flamina. STIGMA forming a little head, fig. 5.

SEED-VESSEL: a roundish CAPSULE, covered by the calyx, of one cavity, the mouth having five teeth, which turn back, fig. 6.

SEEDS numerous, small, and black. RECEPTACLE round and large, fig. 7, 8.

Of this genus there is at present only one known species, and that an inhabitant of every quarter of the globe: nevertheless, it is found but sparingly with us; but may with certainty be met with on the edges of the wet ditches about *Woolwich*, *Charlton*, and *Greenwich*, more particularly in the road leading from *New-Cross* Turnpike to the *Island of St. Helena*, *Rotherhithe*.

It flowers in *July*.

No particular uses are attributed to it.

2068



CAMPANULA ROTUNDIFOLIA. HEATH BELL-FLOWER.

CAMPANULA *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. campanulata, fundo clauso valvis staminiferis. *Stigma* trifidum.
Caps. infera, poris lateralibus dehiscens.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

CAMPANULA *rotundifolia* foliis radicalibus reniformibus, caulinis linearibus. *Lin. Syst. Vegetab.* p. 173.
Sp. Plant. p. 232. *Fl. Succ.* n. 184.

CAMPANULA foliis ferratis, radicalibus cordatis, caulinis lanceolatis. *Haller. Hist.* 701.

CAMPANULA *rotundifolia.* *Scopoli Fl. Carn.* n. 124.

CAMPANULA *minor rotundifolia* vulgaris. *Baubin pin.* 93.

CAMPANULA *rotundifolia.* *Ger. emac.* 452.

CAMPANULA *minor sylvestris rotundifolia.* *Parkinson* 651. *Raii Syn.* p. 277. The lesser round-leaved Bell-flower. *Hudson. Fl. Angl. ed. 2.* p. 95. *Lightfoot Fl. Scot.* p. 141.

RADIX	alba, crassiuscula, modice fibrosa, subdulcis, repens.	ROOT	white, thickish, moderately fibrous, sweetish, and creeping.
CAULES	ex una radice plures, pedales et ultra, sub-erecti, debiles, flexuosi, teretes, glabri, solidi, lactescentes, ramosi.	STALKS	; from the same root several, a foot or more in height, somewhat upright, but weak and crooked, round, smooth, solid, milky, and branched.
FOLIA	radicalia cordato-reniformia, petiolata, dentato-ferrata, caulina prope basin lanceolata, dentata, summa linearia, integerrima.	LEAVES	of the root somewhat heart or kidney shaped, standing on footstalks, toothed, or sawed, those of the stalk near the base lanceolate and toothed, near the summit linear and entire.
RAMI	floriferi, patuli, simplices seu ramosi, subnudi.	FLOWER-BRANCHES	spreading, simple or branched, almost naked.
FLORES	perfecte campanulati, cærulei, parum nutantes.	FLOWERS	perfectly bell-shaped, of a blue colour, and drooping a little.
CALYX:	PERIANTHIUM quinquepartitum, erectum, glabrum, sulcatum, persistens, laciniis linearibus. <i>fig. 1.</i>	CALYX:	a PERIANTHIUM divided into five segments, upright, smooth, grooved, permanent, the segments linear. <i>fig. 1.</i>
COROLLA	monopetala, campanulata, limbo quinquefido, laciniis acutis, patentibus. <i>fig. 2.</i>	COROLLA	monopetalous, bell-shaped, divided into five segments at the brim, which are pointed and spreading. <i>fig. 2.</i>
STAMINA:	FILAMENTA quinque, capillaria, brevissima, inserta valvularum nectarii apicibus; ANTHERÆ filamentis longiores, compressæ, primo purpurascens, dein fuscæ. <i>fig. 3, 4, 5.</i>	STAMINA:	five very fine, short FILAMENTS inserted into the tips of the valves of the nectary; ANTHERÆ longer than the filaments, flattened, at first purplish, afterwards brown. <i>fig. 3, 4, 5.</i>
PISTILLUM:	GERMEN inferum, sulcatum; STYLUS filiformis; STIGMA tripartitum, oblongum, crassiusculum, externe villosum, laciniis revolutis. <i>fig. 6, 7, 8.</i>	PISTILLUM:	GERMEN beneath the calyx, grooved; STYLE thread-shaped; STIGMA oblong, thickish, externally villous, divided into three segments which are rolled back. <i>fig. 6, 7, 8.</i>
NECTARIUM	in fundo corollæ, constructum valvulis quinque, acutis, conniventibus, receptaculum tegentibus. <i>fig. 5.</i>	NECTARY	in the bottom of the corolla, formed of five pointed valves closing and covering the receptacle. <i>fig. 5.</i>

When the *Campanula rotundifolia* grows among herbage, its radical leaves, which are of a roundish figure, at least compared with most of the plants of the same genus, are seldom observed, unless particularly sought for, while those of the stalk are seen by every one to be linear; hence the name of *rotundifolia* to most beginners appears absurd. LINNÆUS in giving it this name has followed the antient Botanists, as will appear from consulting the synonyms.

This plant, as well as the *Epilobium angustifolium*, points out to the student the necessity of attending to the following botanic axiom, *those blossoms which are on the point of expansion shew the structure of the stamina to the most advantage, as those which are overblown do that of the stigma.*

Subject to the same variation in point of size with all other plants, it may be found from * two inches to a yard in height, its radical leaves in certain situations are found without any notches, in which case it is more truly *rotundifolia*; its blossoms also vary in their colour, being sometimes found white and sometimes purple.

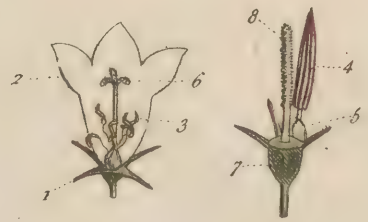
The stalks and branches, when broken, give out a milky juice, which has a disagreeable smell.

It grows plentifully on heaths, and by the road sides in barren hilly situations, and flowers from June to September.

Having a perennial and a creeping root it is easily cultivated in the Garden.

LINNÆUS says a green pigment is prepared from the flowers, but does not inform us in what manner.

* Mr. Lightfoot found it of that height in Scotland.



Campanula rotundifolia.

CHIRONIA CENTAURIUM. CENTAURY.

CHIRONIA *Lin. Gen. Pl.* PENTANDRIA MONOGYNIA.

Cor. rotata. *Pistillum* declinatum. *Stamina* tubo corollæ infidentia. *Antherae* demum spirales. *Pericarp.* 2-loculare

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

CHIRONIA *Centaurium*.

GENTIANA *Centaurium* corollis quinquefidis infundibuliformibus, caule dichotomo, pistillo simplici. *Lin. Syst. Vegetab.* p. 122. *Sp. Plant.* p. 332. *Fl. Suec.* n. 232.

GENTIANA caule dichotomo; floribus infundibuliformibus, striatis, quinquefidis. *Haller. Hist.* n. 648.

GENTIANA *Centaurium*. *Scopoli Fl. Carn.* n. 293.

CENTAURIUM minus *Baub. Pin.* 278.

CENTAURIUM minus vulgare. *Parkins.* 272.

CENTAURIUM parvum. *Gerard. emac.* 547. *Raii Syn.* p. 286. Small Purple Centory. *Hudson Fl. Angl. ed. 2.* p. 102. *Lightfoot Fl. Scot.* p. 152.

RADIX annua, fibrosa, lignosa, flavescentia.

CAULIS spithamæus, et ultra, erectus, plerumque simplex, glaber, angulosus.

FOLIA opposita, sessilia, glabra, radicalia oblonga, apice obtusa, basi angustata, caulina ovato-lanceolata, erecta, trinervia, superioribus sæpe incurvis.

FLORES rosei, corymbosi, erecti, sessiles.

CALYX: PERIANTHIUM monophyllum, quinquefidum, erectum, corollæ subagglutinatum, persistens, laciniis subulatis, subtriangularibus, membranâ connexis. *fig. 1, 2. auct.*

COROLLA monopetala, infundibuliformis, *tubus* cylindraceus, striatus, tenuissimus, calyce duplo longior, *limbus* quinquepartitus, roseus, laciniis ovatis, patentibus. *fig. 3.*

STAMINA: FILAMENTA quinque, alba, filiformia, ex apice tubi enata. ANTHERÆ oblongæ, incumbentes, flavæ, demum spiraliter contortæ. *fig. 4, 5, 6.*

PISTILLUM: GERMEN oblongum, tubum corollæ implens. STYLUS albus, filiformis, germine dimidio brevior, declinatus, aliquando bifidus. STIGMA crassum, bilobum, villosum, *fig. 7, 8, 9.*

PERICARPIUM: CAPSULA oblonga, acuta, nitida, tubo corollæ obtecta, bilocularis, bipartibilis.

SEMINA numerosa, parva, subrotunda, flavescentia.

ROOT annual, fibrous, woody, and of a yellowish colour.

STALK about seven inches high or more, upright, generally simple, smooth, and angular.

LEAVES opposite, sessile, smooth, those of the root oblong, blunt at the point and narrowed at the base; those of the stalk narrow, pointed, upright, three-ribbed, the uppermost often bent inward.

FLOWERS rose-coloured, growing in a corymbus, upright, and sessile.

CALYX: a PERIANTHIUM of one leaf, divided into five segments, upright, slightly glued to the corolla, permanent, the segments tapering to a point, somewhat triangular, connected by a membrane. *fig. 1, 2. magnified.*

COROLLA monopetalous, funnel-shaped, the *tube* cylindrical, striated, extremely thin, twice the length of the calyx, *limb* divided into five segments, of a rose-colour, the segments ovate and spreading. *fig. 3.*

STAMINA: five FILAMENTS, white, thread-shaped, springing from the top of the tube. ANTHERÆ oblong, incumbent, of a yellow colour, finally twisted. *fig. 4, 5, 6.*

PISTILLUM: GERMEN oblong, filling the tube of the corolla. STYLE white, of equal thickness throughout, half the length of the germen, inclining to one side, sometimes bifid. STIGMA thick, composed of two lips and villous. *fig. 7, 8, 9.*

SEED-VESSEL: a CAPSULE, of an oblong shape, pointed, shining, covered by the tube of the corolla, divisible into two parts, with a cavity in each.

SEEDS numerous, small, roundish, of a yellowish colour.

Those who have been accustomed to consider this well-known plant as a *Gentiana*, will be startled at seeing it here first announced as a *Chironia*; but when they come attentively to examine its parts of fructification, they will wonder how they could so readily acquiesce in joining it to a genus with which its structure is wholly irreconcilable. It agrees perfectly with LINNÆUS's character of the genus *Chironia*, the essence of which consists in its *twisted Antherae*; and it is worthy of observation, that the blossoms of two of the *Chironia*'s, not unfrequently met with in the gardens of the curious, are of the same colour as the Centaury. These facts have induced me to add a new genus to the English Catalogue, whereby this plant fortunately assumes its proper name*.

The Centaury grows wild in dry and barren fields, on heaths by the sides of hedges, and sometimes in woods, where it usually acquires a greater height. In the neighbourhood of *Charlton* and *Coombe Woods* it is not unfrequent, and flowers in *July* and *August*.

A variety, with white flowers, is not uncommon.

This herb is extremely bitter, with a disagreeable taste, whence, Baron HALLER observes, the ancients called it *fel terra*, or *gall of the earth*. From an idea, however, that all bitters are good stomachic medicines, it has acquired no small degree of medicinal fame, and is particularly recommended in all weaknesses of the Stomach; also in the Jaundice, Green-sickness, Worms, Agues, Gout, Scurvy, &c.

It may be given in substance to a drachm; in infusion or decoction to two ounces; the extract to a scruple.

Authors have remarked, that it is a plant very difficult of cultivation.

* Centaury has its name *κένταυριον* or *κένταυριον* from *Chiron* the Centaur, "Centaurea curatus dicitur Chiron, cum Herculis excepti hospitio pertractandi arma fugitta excidisset in pedem: quare aliqui *Chironion* vocant." *Plin. l. 25. c. 6. p. 635.*

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Chironia Centaurium.

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Chenopodium hybridum.

CHENOPODIUM HYBRIDUM. THORN-APPLE-LEAVED GOOSEFOOT.

CHENOPODIUM *Lin. Gen. Pl.* PENTANDRIA DIGYNIA.

Cal. 5-phyllus, 5-gonus. *Cor.* o. *Sem.* 1 lenticulare, superum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO (VEL APETALO POTIUS).

CHENOPODIUM *Hybridum* foliis cordatis angulato-acuminatis, racemis ramosis nudis. *Lin. Syst. Veget.* p. 216. *Sp. Pl.* p. 319. *Fl. Suec.* n. 220.

CHENOPODIUM foliis glabris septangulis, floribus paniculatis. *Haller. Hist.* n. 1588.

ATRIPLEX sylvestris latifolia, acutiore folio. *Baub. Pin.* 119.

CHENOPODIUM Stramonii folio. *Vaillant, Paris* 36. t. 7. f. 2.

CHENOPODIO affinis, folio lato, laciniato, in longissimum mucronem procurrente, florum ramulis sparsis. *Raii Hist.* III. 123.

BLITUM Aceris folio. *Pet. H. Brit.* 8. 7.

ATRIPLEX odore et folio Stramonii minori tamen. *Læf. Triumph.* apud fratrem. *Raii Syn.* p. 154. *Hudson. Fl. Angl.* ed. 2. p. 105.

RADIX annua, simplex, fibrosa, fibris plurimis, capillaceis, patentibus.	ROOT annual, simple and fibrous, fibres numerous, capillary, and spreading.
CAULIS pedalis, ad bipedalem erectus, ramosus, angulatus, glaber.	STALK from one to two feet high, upright, branched, angular, and perfectly smooth.
FOLIA petiolata, alterna, glabra, sine farinâ, venosa, subtriangularia, patentia, utrinque plerumque tridentata, acuminata, dentibus magnis, remotis.	LEAVES standing on foot-stalks, alternate, smooth, without any meal, veiny, somewhat triangular, spreading, furnished with three teeth on each side, and running out to a long point, the teeth large, and distant from each other.
PETIOLI foliis breviores, subrugosi, inferne convexi, superne canaliculati.	LEAF-STALKS shorter than the leaves, somewhat wrinkled, convex on the under, and hollow on the upper side.
FLORES paniculati.	FLOWERS growing in a panicle.
PANICULA ampla, ramosissima nuda.	PANICLE large, very much branched and naked.
CALYX : PERIANTHIUM pentaphyllum, persistens, foliolis ovatis, obtusiusculis, pulverulentis, margine membranaceis.	CALYX : PERIANTHIUM of five leaves and permanent, leaves ovate, somewhat obtuse, mealy, membranous at the edge.
COROLLA nulla.	COROLLA wanting.
STAMINA : FILAMENTA quinque subulata, flavescencia, longitudine calycis. ANTHERÆ didymæ, subrotundæ, flavæ, fig. 2.	STAMINA : FILAMENTS five, tapering, yellowish, the length of the calyx. ANTHERÆ double, roundish, and yellow, fig. 2.
PISTILLUM : GERMEN orbiculatum. STYLUS bipartitus, brevis. STIGMATA minima, subreflexa, fig. 3.	PISTILLUM : GERMEN round, but somewhat flattened. STYLE short, bipartite. STIGMATA very small, turned somewhat back, fig. 3.
SEMEN e nigro castaneum orbiculare, depressum, intra calycem.	SEED of a dark chestnut colour, orbicular,* flattened, contained within the calyx.

LINNÆUS, when he bestowed on this *Chenopodium* the name *Hybridum*, had an idea, as may be learned from his *Flora Suecica* *, that it was a spurious plant produced from the *viride*: repeated observations would probably have taught him, that this opinion was too hastily adopted, as the *hybridum* has certainly as great pretensions to be considered as an original species, as the *viride*, the *album*, or any other. Indeed it is one of those *Chenopodiums* which varies the least of any; and, besides the form of its leaves, which resemble those of the Thorn-apple, and its peculiarly branched and naked panicle of flowers, it has a strong and disagreeable smell, which some have compared to that of the Thorn-apple: Also sown in the garden it produces invariably the likeness of the original plant.

Of all the *English* plants of this genus, and we have them all (the *maritimum* excepted) growing wild about *London*, the environs of which are in many places peculiarly favourable to their growth, this is by far the scarcest. I have hitherto discovered it in one place only, and that sparingly, viz. in *Battersea Fields*, betwixt the *Windmill Meadow* and the road leading to *Chelsea Bridge* adjoining the gardener's ground. It flowers in *August*.

It is mentioned, in the third edition of Mr. RAY's *Synopsis*, to have been found by Mr. SHERARD on the banks of some watery pits beyond *Ely*, and by Mr. DALE about *Colchester*. Mr. HUDSON describes it as growing plentifully about *Northfleet*; and Mr. LIGHTFOOT enumerates it among his *Scottish* plants.

Some authors suspect it to be poisonous. TRAGUS, in particular, mentions it as a plant fatal to swine.

* Habet multa communia cum præcedente (*viride*) ut forte olim ab eodem ortum sit, quod racemorum structura indicat. *Fl. Suec.* n. 220. p. 80.

Flexuosum. - With -
BUNIAM BULBOCASTANUM. EARTH-NUT.

BUNIAM *Lin. Gen. Pl. PENTANDRIA DIGYNIA.*

Corolla uniformis. Umbella conferta. Fructus ovatus.

Raii Syn. Gen. 11. UMBELLIFERÆ HERBÆ.

BUNIAM *Bulbocastanum. Lin. Syst. Vegetab. p. 229. Sp. Pl. p. 349.*

BULBOCASTANUM. *Haller Hist. n. 783.*

BULBOCASTANUM. *I. B. III. 2. 30.*

BULBOCASTANUM *majus folio apii. Baubin. Pin. 162.*

BULBOCASTANUM *majus et minus. Ger. emac. 1065.*

NUCULA *terrestris major. Parkins. 893. Raii Syn. p. 209. Earth-Nut, Kipper-Nut, Pig-Nut. Hudson Fl. Angl. ed. 2. p. 122. Lightfoot Fl. Scot. p. 156. Oeder. Fl. Dan. t. 220.*

RADIX *perennis, tuberosa, extus castanei coloris, intus alba, solida, fibras tum ab imo tum a lateribus promens. tenues, gustu subdulci grato, profunde in terra delitescente.*

CAULIS *pedalis, ad bipedalem, erectus, teres, firmulus, crassitie pennæ coracis, substriatus, glaber, penitus viridis, ramosus.*

FOLIA *radicalia longe petiolata, caulina sessilia, omnibus tenuissime divisis, fœniculi modo, saturate viridibus, marginibus foliorum ad lentem aculeato-ciliatis, fig. 7. auct. Spatha brevis, fultatus, lævis, margine membranaceâ, albidâ.*

UMBELLÆ *plures, universalis multiplex radiis septem ad duodecim, partialis brevissima, conferta, radiis circiter duodecim.*

INVOLUCRUM *universale polyphyllum, lineare, breve, sæpe nullum; parziale setaceum, longitudine umbellulæ, aliquando nullum. Perianthium proprium vix manifestum.*

COROLLA *universalis uniformis, flosculi plerique fertiles; propria Petalis quinque, inflexo-cordatis æqualibus, fig. 2.*

STAMINA: *FILAMENTA quinque alba, subulata, corolla longiora, decidua. ANTHERÆ simplices, flavescentes, fig. 3.*

PISTILLUM: *GERMEN oblongum, inferum, viride. STYLI duo albi, suberecti. STIGMATA obtusa, fig. 4, 5.*

SEMINA *duo, oblongo-ovata, hinc convexa inde plana, glabra, subaromatica, fig. 6, 7.*

ROOT *perennial, tuberos, on the outside of a chesnut colour, within white, solid, putting forth slender fibres from the sides as well as the bottom, of an agreeable sweetish taste, lying deep in the ground.*

STALK *from one to two feet high, upright, round, stiffish, the thickness of a crow-quill, slightly striated, smooth, throughout of a green colour, and branched.*

LEAVES *from the root standing on long foot-stalks, those of the stalk sessile, all of them very finely divided like fennel, the small leaves edged with prickly hairs, fig. 1. magn. Sheath short, grooved, smooth, the edge membranous and whitish.*

UMBELLS *several, the general one composed of many rays from seven to twelve; the partial one very short, the rays about twelve and close.*

INVOLUCRUM: *the general one composed of many leaves, linear, short, often wanting; the partial one setaceous, the length of the small umbell, often wanting. Partial Perianthium scarcely manifest.*

COROLLA: *general Corolla uniform, most of the flowers fertile; individual one composed of five Petals, heart-shaped, bent in at top, and equal, fig. 2.*

STAMINA: *five FILAMENTS of a white colour, tapering, longer than the corolla, deciduous. ANTHERÆ simple and yellowish, fig. 3.*

PISTILLUM: *GERMEN oblong, beneath the corolla, of a green colour. STYLES two, white, nearly upright. STIGMATA blunt, fig. 4, 5.*

SEEDS *two, of an oblong-ovate shape, convex on one side and flat on the other, smooth, and somewhat aromatic, fig. 6, 7.*

Children are frequently in the practice of digging up and eating the knobby roots of this plant, which, by some, are supposed to resemble the chesnut in its taste, whence its name of *Bulbocastanum*. Pigs also seek for it with avidity, from which circumstance it has also obtained the name of *Pig-Nut*.

Few of our Umbelliferi have the characteristic marks which distinguish the Bunium; the principal of which are its knobbed root, and finely divided fennel-like leaves. The one which approaches the nearest to it is the *Oenanthe fistulosa*, especially when growing on ditch banks, where it is frequently thrown when the ditches are cleaned, or when it is cultivated in gardens; the roots, in such situations, are so similar to those of the Bunium, as to deceive even good judges. The radical leaves of the plant are also finely divided; it would be no wonder, therefore, if they should be mistaken for the Earth-Nut.

A paper was published, about a year ago, in one of the Magazines, the *London*, if I mistake not, in which the roots of the *Oenanthe crocata*, well known for their poisonous effects, were said to have been eaten for those of this plant. We suspect, however, from various circumstances, that they were the roots of the *Oenanthe fistulosa*. It is our intention to make a more minute inquiry into this matter, and give our reasons more at large for this suspicion, when we figure that species.

The Earth-Nut with us grows chiefly in woods, pastures, and orchards, and flowers in June.



Bunium Bulbocastanum.



Charophyllum sylvestre.

CHÆROPHYLLUM SYLVESTRE. COMMON COW-PARSLEY.

CHÆROPHYLLUM *Lin. Gen. Pl.* PENTANDRIA DIGYNIA.

Involucr. reflexum, concavum. Petala inflexo-cordata. Fructus oblongus, lævis.

Raii Syn. Gen. 11. UMBELLIFERÆ HERBÆ.

CHÆROPHYLLUM *sylvestre* caule lævi striato, geniculis tumidiusculis. *Lin. Syst. Vegetab. p. 238.*

Sp. Pl. p. 369. Fl. Suec. n. 257.

CEREFOLIUM foliis acute dentatis triplicato pinnatis, glabris, nervis hirsutis. *Haller Hist. n. 748.*

CHÆROPHYLLUM *sylvestre. Scopoli Fl. Carn. n. 366.*

MYRRHIS sylvestris feminibus lævibus. *Bauhin Pin. 170.*

CICUTARIA vulgaris. *Dod. Pempt. 701.*

MYRRHIS sylvestris. *Parkinson 935.*

CICUTARIA alba Lugdunensis. *Ger. emac. 1038. Raii Syn. p. 207. Wild Chervil. Hudson Fl. Angl. p. 124. Lightfoot Fl. Scot. p. 167.*

RADIX perennis, crassitie digiti intermedi, ad basin sæpius ramosa, extus pallide fusca, intus albidula, succum vix lacteum fundens.

CAULIS bipedalis et ultra, erectus, crassitie digiti minimi, fistulosus, sulcatus, plerumque villosus, et sæpius purpurascens, ramosus, geniculatus, geniculis paululum incrassatis; rami suberecti, minus pubescentes.

FOLIA radicalia multiplicato-pinnata, sæpe amplissima; Costæ hirsutæ, fistulosæ, dorso acute angulatæ, antice canaliculatæ, ortæque ex vagina brevi striataque, pinnulæ lanceolatæ, acutæ, ferrato-incisæ, plerumque hirsutæ; caulina et ramea successive minora minusque divisa, cæterum similia, superiora sæpe opposita aut terna cum totidem ramis axillariibus.

UMBELLÆ planiusculæ, nec densæ, nec plantæ ratione amplæ, ante anthesin nutantes, radiis compositæ a septem ad octodecim, gracilibus, teretibus et glabris.

INVOLUCRUM universale nullum, parziale pterophyllum et ultra, foliolis acuminato-ovatis, concavis, glabris, ad oras subciliatis, umbellulis duplo brevioribus, tandem reflexis.

FLORES inodori, pauci steriles.

COROLLA: PETALA plana, et obverse ovata, albidula, centralium flosculorum subæqualia, exterorum vero extimum majus, et subcordato emarginatum, *fig. 1, 2, 3.*

STAMINA: FILAMENTA quinque albidula, breviter et caduca. ANTHERÆ subrotundæ, didymæ, flavescentes, *fig. 4.*

PISTILLUM: GERMEN inferum, turbinatum, utrinque compressiusculum, lucidum; glandula nectarifera coronatum. STYLI duo, albi, parviusculi. STIGMATA simplicia, *fig. 5, 6.*

SEMINA duo, oblonga, antice sulcata, cæterum teretia, lævia, nitida, nigricantia, inodora, sapore vix ullo, *fig. 7.*

ROOT perennial, the thickness of the middle finger, most commonly branching out from the base, externally of a pale-brown colour, internally whitish, full of a juice which can scarcely be called milky.

STALK two feet high and upwards, upright, the thickness of the little finger, hollow, grooved, generally villous, and most commonly purplish, branched, jointed, joints somewhat thickened; branches nearly upright, less hoary than the stalk.

LEAVES next the root many times pinnated, often very large; the ribs hirsute, fistulous, forming a sharp angle on the back, hollow in front, and arising from a short striated sheath, the small pinnæ lanceolate, pointed, deeply and irregularly ferrated, generally hirsute, the leaves of the stalk and branches successively smaller, and less divided, in other respects similar, the upper ones often opposite or growing three together, with as many axillary branches.

UMBELLS flattish, neither thick nor large for the size of the plant, drooping before the expansion of the flowers, composed of seven to eighteen radii, which are slender, round, and smooth.

INVOLUCRUM the general one wanting, the partial one composed of five leaves or more, which are ovate, pointed, hollow, smooth, somewhat hairy on the edges, twice as short as the small umbells, finally turned back.

FLOWERS scentless, a few of them barren.

COROLLA: PETALS flat, inversely ovate, whitish, those of the central flowers nearly equal, but the outermost of the outer ones largest, somewhat heart-shaped and nicked, *fig. 1, 2, 3.*

STAMINA: FILAMENTS five, whitish, short, and deciduous. ANTHERÆ nearly round, double, and yellowish, *fig. 4.*

PISTILLUM: GERMEN placed beneath the corolla, broadest at top, flattish on both sides, shining, crowned with a nectariferous gland. STYLES two, white and small. STIGMATA simple, *fig. 5, 6.*

SEEDS two oblong, with a groove in the fore-part, round, smooth, shining, blackish, without scent, and almost tasteless, *fig. 7.*

In many parts of the kingdom this plant is well known by the name of *Cow-parsley*, a term we adopt in preference to *Cow-weed*, or *wild Chervil*; the former being applicable to the *Cow-parsnep* also, and the latter more properly belonging to the *Scandix Cerefolium* and *odorata*.

LINNÆUS's specific character of this *Chærophyllo* is only applicable to the upper part of the plant: the lower part of the stalk, by which it is most obviously distinguished, is strongly grooved, and covered with numerous short hairs.

It is one of the most common, as well as the earliest in blossom, of our *umbelliferi*, flowering in warm situations in *April*, and generally with us in *May*. It grows chiefly in orchards, pastures, and under hedges. In sheltered situations it produces a large crop of early foliage; hence it has been recommended by some writers on agriculture as worthy the attention of the farmer, more especially as cows are said to be fond of it. To rabbits it is a luxurious treat, as those who keep them pretty generally know. In time of scarcity, the young leaves, in some parts of the kingdom, are used as a pot-herb: the *boiled roots* are said to have a poisonous quality, perhaps without any foundation.

LINNÆUS remarks, in his *Flora Suecica*, that its presence indicates a fertile soil; and that its flowers are capable of communicating a yellow dye to woollen cloth.



MYOSURUS MINIMUS. MOUSE-TAIL.

MYOSURUS *Lin. Gen. Pl.* PENTANDRIA POLYGYNIA.

Cal. 5-phyllus, basi adnatus. *Nectaria* 5 subulata, petaliformia. *Sem.* numerosa.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

MYOSURUS *minimus. Lin. Syst. Vegetab.* p. 254. *Sp. Pl.* p. 407. *Fl. Suec.* n. 276.

MYOSURUS. *Haller. Hist.* n. 1159.

HOLOSTEO adfinis Cauda muris. *Baub. Pin.* 190.

CAUDA MURINA. *Dod. Pempt.* 112.

RANUNCULUS gramineo folio, flore caudato, feminibus in capitulum spicatum congestis. *Tournefort Inst.* 293.

MYOSUROS. *Dillen. Nov. Gen.* p. 108. t. 4.

HOLOSTEUM Loniceri, Cauda muris vocatum. *Park.* 500.

CAUDA MURIS. *Gerard. emac.* 426. *Raii Syn.* 251. Mouse-tail. *Lightfoot Fl. Scot.* p. 179. *Hudson Fl. Angl.* ed. 2. p. 130.

RADIX annua, fibrosa.

FOLIA, omnia radicalia, viginti circiter in plantâ mediâ magnitudinis, erecta, longitudine inæquali, linearia, superne latiora, compressa, utrinque obsolete canaliculata, glabra, subcarnosa, obtusa, e flavo-viridia, basi rubicunda.

SCAPI quatuor, quinque, aut plures, uniflori, erecti, bipollicares et ultra, foliis longiores, teretes, superne paulo crassiores, glabri.

CALYX: PERIANTHIUM pentaphyllum, foliolis oblongis, obtusis, concavis, herbaceis, patentibus. Unguibus postice elongatis, appressis, acuminatis. *fig.* 1, 2.

COROLLA: PETALA quinque, calyce breviora, minutissima, flavescentia, unguiculata, limbo patente, basi subtubulosa. *fig.* 3. *auct.* 5.

STAMINA: FILAMENTA quinque, vel plura, longitudine fere calycis, receptaculo inserta, filiformia, alba, erecta. ANTHERÆ oblongæ, lutescentes. *fig.* 4.

PISTILLUM: GERMINA numerosa, receptaculo in formam conico-oblongam infidentia. STYLI nulli. STIGMATA minima, simplicia. *fig.* 6.

PERICARPIUM nullum. Receptaculum longissimum, styliforme, feminibus imbricatum dispositis tectum. *fig.* 7.

SEMINA numerosa, compressa, mucronata. *fig.* 8, 9.

ROOT annual and fibrous.

LEAVES, all of them radical, about twenty in a plant of a middling size, upright, of unequal length, linear, broadest at top, and flattened, faintly channeled on each side, smooth, somewhat fleshy, blunt, of a yellowish green colour, and reddish at the base.

FLOWERING-STEMS four, five, or more, each supporting one flower, upright, two inches or more in length, longer than the leaves, round, smooth, and a little thickest at the top.

CALYX: a PERIANTHIUM of five leaves, the leaves oblong, obtuse, hollow, herbaceous, spreading. Claws lengthened out behind, pressed to the flowering stem, and tapering to a point. *fig.* 1, 2.

COROLLA: five PETALS, shorter than the calyx, very minute, of a yellowish colour, clawed, the limb spreading, somewhat tubular at its base. *fig.* 3. *magn.* 5.

STAMINA: FILAMENTS five or more, almost the length of the calyx, fixed to the receptacle, thread-shaped, white, upright. ANTHERÆ oblong and yellowish. *fig.* 4.

PISTILLUM: GERMINA numerous, sitting on a receptacle, of an oblong, conic shape. STYLES none. STIGMATA very small and simple. *fig.* 6.

SEED-VESSEL none. Receptacle very long, style-shaped, covered with seeds, laying one over another. *fig.* 7.

SEEDS numerous, flat, and pointed. *fig.* 8, 9.

Some of the early Botanists gave to this plant the name of *Mouse-tail*, more from the general appearance of the plant than any particular attention to generic character. *TOURNEFORT* afterwards arranged it with the *Ranunculi*, *DILLENIUS*, not satisfied with such arrangement, made a distinct genus of it; which has been adopted by *LINNÆUS*.

The structure of the whole fructification is singular, and deserving the attention of the young Botanist; in particular, he should be careful to distinguish the Corolla from the Stamina.

This delicate little annual grows in corn and clover-fields, and by path-sides, especially where water has been apt to stagnate. It is found about *Islington*, *Paddington*, and *Pancras*; but with more certainty in the fields about *Dulwich*, especially on the right-hand-side of *Lordship-lane*, near *Dulwich Wood*.

It flowers in *May* and *June*, and ripens its seed in *July* and *August*.



Peplis Portula.

PEPLIS PORTULA. WATER PURSLANE.

PEPLIS *Lin. Gen. Pl.* HEXANDRIA MONOGYNIA.

Perianth. campanulatum: ore 12-fido. *Petala* 6, calyci inserta. *Caps.* 2-locularis.

Raii Syn. Gen. 25. HERBÆ HEXAPETALÆ ET POLYPETALÆ VASCULIFERÆ.

PEPLIS *Portula* floribus apetalis. *Lin. Syst. Vegetab.* p. 283. *Sp. Pl.* p. 474. *Fl. Suec.* n. 311.

PEPLIS petalis senis, sæpissime apetala. *Haller Hist.* n. 856.

ALSINE palustris minor serpyllifolia. *Bauh. Pin.* 120.

ANAGALLIS Serpyllifolia aquatica. *I. B. III.* p. 372.

GLAUX aquatica folio subrotundo. *Loefel.* p. 106. *ic.* 20.

GLAUX altera subrotundo folio. *Boccone t.* 84. *Vaillant. Bot. par. t.* 15. *f.* 5.

GLAUCOIDES palustre portulacæ folio, purpureo flore. *Michel.* p. 21. *t.* 18.

PORTULA. *Dillen. Nov. Pl. Gen.* p. 133. *t.* 7.

ALSINE rotundifolia f. *Portulaca* aquatica. *Ger. em.* 614.

ALSINE aquatica minor folio oblongo f. *Portulaca* aquatica. *Park.* 1260. *Raii Syn.* p. 368.
Water Purslane. *Hudson. Fl. Angl. ed.* p. 147. *Lightfoot Fl. Scot.* p. 187.

RADIX annua, fibrosa.	♦ ROOT annual and fibrous.
CAULIS palmaris et ultra, tetragonus, repens, ramosus, lævis, rubicundus, geniculatus.	♦ STALK a hand's breadth or more in length, square, creeping, branched, smooth, and red.
FOLIA opposita, subrotunda, petiolata, integerrima, glabra, nervo medio rubicundo.	♦ LEAVES opposite, roundish, standing on foot-stalks, perfectly entire, smooth, and shining, the midrib reddish.
FLORES oppositi, axillares, sessiles, minimi.	♦ FLOWERS opposite, in the axæ of the leaves, sessile, and very small.
CALYX: PERIANTHIUM monophyllum, campanulatum, persistens, maximum, ore duodecim-fido, denticulis alternis minoribus, reflexis, <i>fig.</i> 1.	♦ CALYX: a PERIANTHIUM of one leaf, bell-shaped, permanent, very large (in proportion to the petals) the mouth cut into five segments, of which the alternate ones are least and turned back, <i>fig.</i> 1.
COROLLA: PETALA raro sex, ovata, minutissima, rosea, calycis fauci inserta, <i>fig.</i> 2.	♦ COROLLA: PETALS seldom so many as six, ovate, very small, rose-coloured, inserted into the mouth of the calyx, <i>fig.</i> 2.
STAMINA: FILAMENTA sex, subulata, brevia. ANTHERÆ subrotundæ, <i>fig.</i> 3.	♦ STAMINA: six FILAMENTS, tapering and short. ANTHERÆ roundish, <i>fig.</i> 3.
PISTILLUM: GERMEN ovatum. STYLUS brevissimus. STIGMA orbiculatum, <i>fig.</i> 4.	♦ PISTILLUM: GERMEN ovate. STYLE very short. STIGMA round, <i>fig.</i> 4.
PERICARPIUM: CAPSULA subrotunda, bilocularis, tenuissima, pellucida, <i>fig.</i> 5.	♦ SEED-VESSEL: a roundish CAPSULE of two cavities, extremely thin and pellucid, <i>fig.</i> 5.
SEMINA plurima, minima, albida, angulata, <i>fig.</i> 6.	♦ SEEDS numerous, very minute, whitish and angular.

The numerous synonyms prefixed to the description of this plant shew in what a variety of lights it has been viewed by different Botanists. Those of early times called it *Alfine*, as they did almost every plant whose parts of fructification were small, and which bore the most distant similitude to Chickweed.

MICHELI and DILLENIIUS in their respective *Nova Genera* wrought much reformation in these minute plants; and if they did not arrive at the ultimatum of description and figure, they paved the way to it.

The *Peplis Portula* is a very common plant in pools of water that are apt to be dried up in the summer, particularly on heaths. It flowers from June to August. Its petals are very minute, and frequently fall short of their proper number.



Polygonum amphibium.

POLYGONUM AMPHIBIUM. AMPHIBIOUS PERSICARIA.

POLYGONUM *Lin. Gen. Pl. OCTANDRIA TRIGYNIA.*

Cal. o. Cor. 5-partita, calycina. Sem. i. angulatum:

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS:

POLYGONUM *amphibium* floribus pentandris femidigynis, spica ovata: *Lin. Syst. Vegetab. p. 312. Sp. Pl. 517. Fl. Suec. n. 341.*

POLYGONUM foliis ovato lanceolatis ciliatis, spicis ovatis. *Haller Hist. n. 1565.*

POTAMOGETON falicis folio. *Baub. pin. 193.*

FONTALIS major longifolia. *Parkin. 1254.*

POTAMOGITON angustifolium. *Ger. emac. 821.*

PERSICARIA falicis folio perennis. *Raii Syn. Perennial Willow-leaved Arsmart, commonly called narrow-leaved Pondweed. Hudson Fl. Angl. ed. 2. p. 169. Lightfoot Fl. Scot. p. 207. Oeder Fl. Dan. t. 282. Threlkeld Syn. Stirp. Hibern.*

RADIX perennis, repens, crassitie culmi triticei majoris, e rubro-fusca, ex hortis five agris difficillime eruta.

CAULIS sesquipedalis et ultra; adscendens, plerumque simplex, teres, fistulosus, sæpius ruber, geniculis tumidiusculis.

FOLIA petiolata, cordato-lanceolata, hirsutula, ciliata; rigidula, saturate viridia, sæpe maculata, subundulata, alterna, patentia.

STIPULÆ longæ, muticæ, hirsutæ, vaginantes, caulem arcte cingentes.

PEDUNCULI solitarii, seu gemini, hirsuti, rubri, ad unum latus compresso-fulcati, vix terminales.

SPICÆ ruberrimæ, primo pyramidales, demum ovatæ.

CALYX: PERIANTHIUM pedicellatum, quinque-partitum, coloratum, persistens, laciniis ovatis, obtusis. *fig. 1.*

COROLLA nulla.

STAMINA: FILAMENTA quinque; aut sex, fundo calycis inserta, subulata, alba, calyce longiora; ANTHERÆ didymæ; POLLEN album, globosum. *fig. 2.*

PISTILLUM: GERMEN subovatum, rubrum; STYLUS ad medium usque divisus; STIGMATA duo, rotunda. *fig. 3.*

SEMEN ovatum, utrinque compressum, acutum, nitidum, e nigro castaneum. *fig. 4.*

ROOT perennial, creeping, the thickness of a large wheaten straw, of a reddish brown colour, with the greatest difficulty rooted out of gardens or fields.

STALK a foot and a half or more in length, bending upward, generally simple, round, hollow, most commonly of a red colour, the joints a little swelled.

LEAVES standing on footstalks, lanceolate, with a heart-shaped base, slightly hirsute, edged with hairs, harsh to the touch, of a deep green colour, often spotted, somewhat waved, alternate, and spreading.

STIPULÆ long, not fringed with hairs at the extremity, hirsute, forming a sheath, which closely surrounds the stalk.

FLOWER-STALKS growing singly, or two together, hirsute, red, on one side flattened, and slightly grooved, not properly terminal.

SPIKES of the flowers of a bright red colour, at first pyramidal, afterwards ovate.

CALYX: a PERIANTHIUM on a footstalk, divided into five segments, coloured and permanent, the segments ovate and obtuse. *fig. 1.*

COROLLA wanting.

STAMINA: five FILAMENTS inserted into the bottom of the calyx, tapering, white, longer than the calyx; ANTHERÆ double; POLLEN white and globular. *fig. 2.*

PISTILLUM: GERMEN somewhat ovate, and of a red colour; STYLE divided as far as the middle; STIGMATA two, round. *fig. 3.*

SEED ovate, flattened on each side, pointed, glossy, of a dark chestnut colour. *fig. 4.*

The species of *Polygonum* here figured acquires the name of *amphibium* from its growing both on land and in water; in ponds its leaves usually float, whence the antient botanists, regardless of its fructification, improperly called it a *Pondweed*, thus CASPAR BAUHINE gives it the name of *Potamogeton falicis folio*; RAY very properly corrects this error, and calls it *Persicaria Salicis folio perennis*.

Of the *Persicaria* division of the genus *Polygonum* *Linnaei*, this is the only one that has a perennial root, a character which at once distinguishes it as a species, besides this it has many peculiarities, the leaves are heart-shaped at the base, with the edges fringed with hairs, they are also harsher to the touch than any of the other *Persicaria*'s, especially when the plant grows out of the water, its stipulæ more closely surround the stalk, which has generally two spikes of flowers at its extremity, neither of which are perfectly terminal, these spikes are more pyramidal when young, and of a brighter red colour than any of the species related to it; when it grows in the water the whole plant becomes smoother and is more disposed to blossom; botanists have also observed that the stamina, which when the plant grows on land are longer, are here shorter than the corolla*.

As a weed few plants are more pernicious, Battersea Fields, in which this plant abounds, bear sufficient testimony to the truth of this assertion, as its roots not only creep, but penetrate so deep into the earth that they are seldom or never eradicated; in the drier part of the fields it seldom flowers, but in certain spots, where the water has settled in wet seasons, it flowers abundantly in September.

From its blossoming thus rarely in arable land it fortunately is a more local plant than many of the same genus, the seeds of which are either sown or introduced with manure.

To atone for its mischievous effects on land, it contributes highly to ornament ponds, rivers, and pieces of water; those who wish to cultivate it for this purpose need only plant the roots near the water's edge, the plants will quickly find their way into the water, where they must be secured from water-fowl, who are fond of its seeds.

* This is by no means constant.



Polygonum Convolvulus.

POLYGONUM CONVULVULUS. CLIMBING BUCK-WHEAT.

POLYGONUM *Lin. Gen. Pl.* OCTANDRIA TRIGYNIA.

Cal. o. *Cor.* 5-partita, calycina. *Sem.* 1. angulatum.

Raii. Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

POLYGONUM *Convolvulus* foliis cordatis, caule volubili angulato, floribus obtusatis. *Lin. Syst. Veg.* p. 313. *Sp. Pl.* p. 522. *Fl. Suec.* n. 344.

POLYGONUM caule volubili, foliis sagittatis. *Haller. Hist.* n. 1561.

POLYGONUM *Convolvulus.* *Scopoli Fl. Carn.* n. 469.

CONVOLVULUS minor femine triangulo. *Bauh. Pin.* 295.

HELVINE femine triangulo. *I. B.* II. 157.

VOLUBILIS nigra. *Ger. emac.* 863.

CONVOLVULUS minor Atriplicis folio. *Park.* 171.

FEGOPYRUM scandens sylvestre. *Raii Syn.* p. 144. Black Bind-weed. *Hudson Fl. Angl.* ed. 2. p. 171. *Lightfoot Fl. Scot.* 208.

RADIX annua, fibrosa, fusca.

CAULIS volubilis, tortus, ramosus, ramis alternis, fulcro destitutus, procumbens, pedalis, id nactus circa calamos et fruticulos scandit sæpe ad altitudinem usque humanam.

FOLIA petiolata, sagittata, glabra, integerrima, inferne solitaria, superne bina et terna, inferioribus frequenter coloratis.

STIPULÆ parvæ, vaginantes, muticæ.

FLORES racemosi, pedunculati, in fasciculos pendulos dispositi.

RACEMI longi, alterni.

CALYX: PERIANTHIUM quinquepartitum, persistens, laciniis tribus exterioribus majoribus, carinatis, viridibus, margine membranaceis, interioribus petaliformibus, coloratis, *fig.* 1.

COROLLA nulla.

STAMINA: FILAMENTA octo, fundo calycis inserta, brevissima, subulata. ANTHERÆ purpureæ, didymæ, *fig.* 3.

PISTILLUM: GERMEN viride, triquetrum. STYLUS brevissimus, staminibus paulo brevior. STIGMA capitatum, trilobum, *fig.* 4.

PERICARPIUM nullum, calyx semen continens.

SEMEN unicum, trigonum, nigerrimum, *fig.* 5.

ROOT annual, fibrous, of a brown colour.

STALK twining, twisted, branched, branches alternate, when destitute of support, procumbent and about a foot in length, when growing about corn or shrubs often reaching the height of six feet.

LEAVES standing on foot-stalks, arrow shaped, smooth, perfectly entire, on the lower part of the stalk standing singly, on the upper part two and three together, the lowermost often coloured.

STIPULÆ small, forming a sheath round the stalk.

FLOWERS growing in racemi, standing on foot-stalks, and disposed in pendulous clusters.

FLOWER-BRANCHES long, and alternate.

CALYX: a PERIANTHIUM divided into five segments, and permanent, the three outermost segments larger, keeled, green and membranous on the edge, the innermost petal-like and coloured, *fig.* 1.

COROLLA none.

STAMINA: eight FILAMENTS fixed into the bottom of the calyx, very short and tapering, ANTHERÆ purple, formed of two lobes, *fig.* 3.

PISTILLUM: GERMEN green, three-cornered. STYLE very short, not quite so long as the stamina. STIGMA forming a little head, composed of three lobes, *fig.* 4.

SEED-VESSEL none, the calyx containing the seed.

SEED a single one, three-cornered, very black, *fig.* 5.

Some of the ancient Botanists, inattentive to the fructification, arrange this plant with the *Convolvuli* or *Bind-weeds*. RAY calls it *Fegopyrum scandens sylvestre*, but retains the old *English* name of *Black Bind-weed*. LINNÆUS classes it with the *Polygonum*, or *Knot-grass*, in which genus he also includes the *Bistorta*, the *Perficaria*, and the *Fagopyrum*; he could not, perhaps, scientifically have made more genera of them; yet nature, in all our *English* plants at least, keeps up a strong distinction between them, and as the old established names of *Bistort*, *Perficaria*, or *Arse-smart*, *Knot-grass*, and *Buck-wheat*, have no tendency in them to mislead, we have thought it better, in the present instance, to continue their use, than to adopt the new-fangled names of *Buck-wheat Knot-grass*, or *Binding Snake-weed*. In its fructification this plant is very similar to the *Buck-wheat*; but differs in having a twining stalk, with which it frequently twists round other plants, and proves injurious to them, especially in gardens and cultivated fields, where it often grows extremely rampant; in poor land it is an humble plant.

It flowers in *July* and *August*.

Its seeds afford excellent food for small birds. One year I observed its foliage, together with that of the *Passion Flower*, very much eaten by the *Ear-wig*, a well known enemy to certain flowers, and no less destructive to *Caterpillars*, and which, like the *Cock-roach*, is principally active under the veil of night.



Silene anglica.

SILÈNE ANGLICA. ENGLISH CATCHFLY.

SILÈNE *Lin. Gen. Pl.* DECANDRIA TRIGYNIA.

Cal. ventricosus. *Petala* 5-unguiculata: coronata ad faucem. *Caps.* 3-locularis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SILÈNE *anglica* hirsuta petalis emarginatis, floribus erectis, fructibus reflexis pedunculatis alternis. *Lin. Syst. Vegetab. p.* 350. *Sp. Pl.* 594.

SILÈNE *anglica* hirsuta petalis subintegerrimis, floribus subspicatis pedunculatis alternis erectis, fructibus divaricato-reflexis. *Hudson Fl. Angl. ed.* 2. *p.* 187.

VISCAGO cerasii foliis vasculis pendulis Anglica. *Dill. Elth.* 417. *t.* 309. *f.* 398.

LYCHNIS sylvestris hirsuta annua, flore minore albo. *Vaill. Paris.* 121. *t.* 16. *f.* 12.

LYCHNIS sylvestris flore albo minimo. *Raii Syn. p.* 339. Small Corn Champion, with a very small white flower.

RADIX annua, simplex.

CAULIS plerumque pedalis, et ultra, erectus, teres, hirsutus, viscidus, articulatus, geniculis tumidis, ramosus, in horto culta ramosior, debiliorque evadit, et geniculi magis intumescunt.

RAMI alterni, cauli fimiles.

FOLIA opposita, connata, lanceolata, subundulata, integerrima, hirsutula, subviscida, punctis prominulis asperula, ad basin pilis longis ciliata.

FLORES albidii, minimi, axillares, subspicati, pedunculati.

PEDUNCULI variæ longitudinis unguiculares et pollicares, teretes, superne incrassati, viscidi, primo erecti, dein reflexi, demum feminibus maturis suberecti.

CALYX: PERIANTHIUM monophyllum, tubulosum, quinquedentatum, dentibus apice rubris, oblongum, fulcis decem profunde exaratum, pilosum, viscidum, persistens, *fig.* 1.

COROLLA: PETALA quinque. Ungues angusti, longitudine calycis. Lamina integra seu emarginata, lateribus sæpe involutis, squamula ad basin laminæ bifida, erecta, *fig.* 2.

STAMINA: FILAMENTA decem, subulata, alba, ad lentem hirsuta. ANTHERÆ oblongæ, bilobæ, purpureæ. POLLEN album, *fig.* 3.

PISTILLUM: GERMEN viride, nitidum, subconicum; STYLI tres, albi, erecti, villosi, germinibus breviores, *fig.* 4, 5. Glandula nectarifera ad basin germinis, *fig.* 6.

PERICARPIUM: CAPSULA ovata, calyce tecta, trilocularis, apice sexfariam dehiscens, *fig.* 7.

SEMINA plurima, nigricantia, reniformia, ad lentem aspera, *fig.* 8.

ROOT annual and simple.

STALK about a foot or more in height, upright, round, hirsute, viscid, jointed, the joints swelled, branched; cultivated in the garden, it becomes more branched, weaker, and the joints more swelled.

BRANCHES alternate, like the stalk.

LEAVES opposite, connate, lanceolate, somewhat waved, entire, slightly hairy, and somewhat viscid, roughish, with little prominent points, at the base edged with longer hairs.

FLOWERS whitish, very small, growing from the axæ of the leaves, forming a kind of spike, standing on foot-stalks.

FLOWER-STALKS of various lengths, from half an inch to an inch, round, thickened upwards, viscid, at first upright, afterwards turned downwards, finally, when the seeds are upright, becoming nearly upright.

CALYX: a PERIANTHIUM of one leaf, tubular, having five teeth, which are red at the tips, oblong, marked with ten deep grooves, hairy, viscid, and permanent, *fig.* 1.

COROLLA: five PETALS. Claws narrow, the length of the calyx. Lamina entire, or nicked, the sides often rolled in, the scale at the base of the lamina bifid and upright, *fig.* 2.

STAMINA: ten FILAMENTS, tapering, white, hairy when magnified. ANTHERÆ oblong, formed of two lobes and purple. POLLEN white, *fig.* 3.

PISTILLUM: GERMEN green, shining, somewhat conical. STYLES three, white, upright, villous, shorter than the germs, *fig.* 4, 5. A nectariferous Gland at the base of the germen, *fig.* 6.

SEED-VESSEL: an ovate CAPSULE, covered by the calyx, of three cavities, opening at top, with six teeth, *fig.* 7.

SEEDS numerous, blackish, kidney-shaped, rough when viewed with a magnifier, *fig.* 8.

The present, though not a showy plant, may be numbered among the more rare ones in the neighbourhood of London, as well as in many other parts of Great-Britain; nor does it appear to be common throughout Europe: yet, in particular spots, it is found in great plenty, as in the corn-fields about Coombe-Wood. I have also seen it growing in great abundance in the corn-fields near Newport, in the Isle of Wight.

It flowers in July.

DILLENIUS gives a figure of it in his *Hortus Elthamensis*, which is too diminutive: his character of *vascula pendula* is not too much to be depended on, since it frequently happens that they are not so.



Acanaria trinervia.

ARENARIA TRINERVIA. PLANTAIN-LEAVED CHICKWEED.

ARENARIA *Lin. Gen. Pl.* DECANDRIA TRIGYNIA.

Cal. 5-phyllus, patens. *Petala* 5, integra. *Caps.* 1, locularis, polysperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

ARENARIA *trinervia* foliis ovatis acutis petiolatis nervosis. *Lin. Syst. Vegetab.* p. 353. *Sp. Pl.* p. 605. *Fl. Suec.* n. 397.

ALSINE foliis ovato-lanceolatis, trinerviis. *Haller. Hist.* n. 878.

ALSINE *Plantaginis folio.* I. B. III. 364. *Raii Syn.* p. 349. Plantain-leaved Chickweed. *Hudson Fl. Angl. ed.* 2. p. 191. *Lightfoot Fl. Scot.* p. 230. *Oeder Fl. Dan.* t. 429.

RADIX annua, tenuissima, fibrosa, albida.	ROOT annual, very slender, fibris, and whitish.
CAULES plures, spithamæi, pedales, et ultra, debiles, teretes, undique pubescentes, geniculati, ramosissimi.	STALKS several, a span, a foot or more in length, weak, downy all round, jointed, and very much branched.
FOLIA opposita, ovata, acuta, pallide viridia, trinervia, integerrima, margine nervisque minutim ciliatis, supremis sessilibus, inferioribus petiolatis, crebrioribus, minoribus.	LEAVES opposite, ovate, pointed, of a pale green colour, three-ribbed, entire, the edge and ribs finely fringed with hairs, the uppermost sessile, the lowermost standing on foot-stalks, more numerous and smaller.
PETIOLI subulati, marginibus pilosis.	LEAF-STALKS somewhat winged, the edges hairy.
FLORES alterni, solitarii, e dichotomia caulis.	FLOWERS alternate, solitary, proceeding from the forking of the stalk.
PEDUNCULI teretes, pubescentes, primo erecti, deum horizontaliter extensi, apice subinflexo, et paululum incrassato.	FLOWER-STALKS round, downy, at first erect, finally horizontally extended, the tip somewhat bent in, and a little thickened.
CALYX: PERIANTHIUM pentaphyllum, foliis ovato-acuminatis, carinatis, pubescentibus, corolla longioribus, fig. 1.	CALYX: a PERIANTHIUM of five leaves, which are ovate, running out to a point, keeled, downy, longer than the corolla, fig. 1.
COROLLA: PETALA quinque, parva, alba, obovata, integra, fig. 2.	COROLLA: five PETALS, small, white, inversely ovate and entire, fig. 2.
STAMINA: FILAMENTA decem, longitudine corollæ, alba, filiformia. ANTHERÆ minutæ, flavæ, fig. 3.	STAMINA: ten FILAMENTS, the length of the corolla, white, filiform. ANTHERÆ very small, and yellow, fig. 3.
PISTILLUM: GERMEN ovatum. STYLI tres, longitudine germinis. STIGMATA obtusiuscula, fig. 4.	PISTILLUM: GERMEN ovate. STYLES three, the length of the germen. STIGMATA bluntish, fig. 4.
PERICARPIUM: Capsula subconica, tecta, unilocularis.	SEED-VESSEL: a Capsule of a shape somewhat conic, covered by the calyx, and having one cavity.
SEMINA plurima, subreniformia, planiuscula, glaberrima, nigra.	SEEDS numerous, somewhat kidney-shaped, flattish, very smooth, and black.

There exists a considerable similarity betwixt the present plant and the common Chickweed; the attentive observer will, however, find them to differ very materially.

As a principal part of the professed design of this work is to remove, as much as possible, every difficulty attending an investigation of the British plants, we shall point out those differences which have appeared to us the most striking in comparing the two together. The common Chickweed, as its name imports, is found almost every where, as well in exposed as in shady situations; this, on the contrary, is found with us only in woods, and on the shady banks surrounding them, and, compared with the other, may be considered rather as a scarce plant. The common Chickweed flowers in *March* and *April*; this produces its blossoms in *May* and *June*. The common Chickweed has a row of hairs running down each side of the stalk; this is uniformly covered with very short hairs, scarcely discernible. The former has a procumbent stalk; this grows erect. In the former the leaves are not distinguished by any veins or ribs; this, on the contrary, has three strong ones, which give them somewhat the appearance of those of Plantain, whence its name. In the former the petals are bifid; in this they are entire. The seeds also afford another very striking difference: in the common Chickweed they are brown and rough; while those of the *trinervia* are black, perfectly smooth, and shining.

We know of no particular use to which this diminutive plant is applicable.

ARENARIA SERPYLLIFOLIA. THYME-LEAVED CHICKWEED.

ARENARIA *Lin. Gen. Pl.* DECANDRIA TRIGYNIA.

Cal. 5-phyllus, patens. *Petala* 5-integra. *Caps.* 1-locularis, polysperma.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

ARENARIA *serpyllifolia* foliis subovatis acutis sessilibus, corollis calyce brevioribus. *Lin. Syst. Veg.* p. 353. *Sp. Pl.* p. 606. *Fl. Suec.* n. 398.

STELLARIA *serpyllifolia.* *Scopoli Fl. Carn.* n. 544.

ALSINE foliis ovato-lanceolatis, subhirsutis, petalis calyce brevioribus. *Haller Hist.* n. 875.

ALSINE minor multicaulis. *Bauh. Pin.* 250.

ALSINE minima. *Ger. emac.* 612. *Raii Syn.* 349. The least Chickweed. *Hudson Fl. Angl.* p. 191. *Lightfoot Fl. Scot.* p. 230.

RADIX annua, fibrosa, albida.

CAULES plerumque plures, palmares, suberecti, teretes, pubescentes, geniculati, ut plurimum simplices, apice dichotomi, ramis bifidis.

FOLIA opposita, ovata, acuta, sessilia, rigidula, hirsutula, ad lentem ciliata, nervo medio subtus conspicuo, inferioribus crebrioribus.

FLORES albi, pedunculati.

PEDUNCULI teretes, foliis longiores, uniflori, e dichotomia caulis, ad unum latus inclinati, suberecti.

CALYX: PERIANTHIUM pentaphyllum, foliolis lanceolatis, acuminatis, hirsutulis, carinatis, *fig. 1.*

COROLLA: PETALA quinque, alba, ovata, obtusa, calyce duplo fere breviora, *fig. 2.*

STAMINA: FILAMENTA decem, alba, capillaria, longitudine corollæ. ANTHERÆ subrotundæ, albæ, *fig. 3.*

PISTILLUM: GERMEN viride, subrotundum. STYLITES, albi, filiformes reflexi. STIGMATA simplicia, *fig. 4.*

PERICARPIUM: Capsula ovata, subventricosa, testæ, unilocularis, apice quinquefariam, seu sexfariam dehiscens, *fig. 5.*

SEMINA plurima, minima, reniformia, ad lentem lineis insculptis pulchre reticulata, *fig. 6.*

ROOT annual, fibrous, and whitish.

STALKS for the most part numerous, about four inches high, nearly upright, round, downy, jointed, for the most part simple, dichotomous at top, branches bifid.

LEAVES opposite, ovate, pointed, sessile, a little rigid and slightly hirsute, visibly ciliated when magnified, the midrib conspicuous on the under side, the lowermost leaves growing thickest together.

FLOWERS white, standing on foot-stalks.

FLOWER-STALKS round, longer than the leaves, supporting one flower, proceeding from the forking of the stalk, inclined to one side, and nearly upright.

CALYX: a PERIANTHIUM of five leaves, which are lanceolate, tapering to a point, somewhat hairy and keeled, *fig. 1.*

COROLLA: five petals, of a white colour, ovate, obtuse, about half the length of the calyx, *fig. 2.*

STAMINA: ten FILAMENTS, white, very fine, the length of the corolla. ANTHERÆ roundish and white, *fig. 3.*

PISTILLUM: GERMEN green, roundish. STYLES three, white, filiform and reflexed. STIGMATA simple, *fig. 4.*

SEED-VESSEL: an ovate Capsule, somewhat bellying out at bottom, covered by the calyx, of one cavity, opening at top, with five or six teeth, *fig. 5.*

SEEDS numerous, very small, kidney-shaped, beautifully reticulated with impressed lines, visible when magnified, *fig. 6.*

This plant, one of the least of the genus *Arenaria*, is very common on walls, among rubbish, and in dry and barren places. It flowers in *June*.

There is a neatness in it sufficient to recommend it as an ornamental plant for walls, rocks, &c. on which it will grow most readily.

The rigidity of its stalks, and thyme-like form of its leaves, readily distinguish it from all its congeners.

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Veronica serpyllifolia.



Sedum sexangulare?

SEDUM SEXANGULARE. INSIPID STONECROP.

SEDUM *Linn. Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5 fidus. *Cor.* 5 petala. *Squamæ* nectariferæ 5 ad basin germinis. *Caps.* 5.

Raii Syn. Gen. 17. HERBÆ MULTISILIQUÆ SEU CORNICULATÆ.

SEDUM *sexangulare* foliis subovatis adnato sessilibus gibbis erectiusculis sexfariam imbricatis. *Linn. Syst. Vegetab.* p. 359. *Spec. Plant.* p. 620. *Fl. Suecic.* n. 404.

SEDUM foliis teretibus, ternatis; caulibus simplicibus trifidis. *Haller. Hist.* n. 965.

SEDUM *sexangulare.* *Scopoli Fl. Carn.* n. 558.

SEMPERVIVUM minus vermiculatum insipidum. *Baubin. Pin.* 284.

SEDUM minimum luteum non acre. *Baubin. Hist.* 3. p. 695. *Hudson Fl. Angl. ed.* 1. p. 172.

RADIX perennis, fibrosa.

CAULES basi repentes, floriferi erecti, tripollicares et ultra, teretes, glabri, punctati, inferne nudi, rubentes.

FOLIA oblonga, carnosa, teretiuscula, obtusa, erecto-patentia, sexfariam imbricata, presertim ante florescentiam, rigidula, adnato-sessilia, inferne rubentia, superne caulibus saltem floriferis e flavo viridia, insipida.

CYMA plerumque trifida, floribus in singulo ramulo tribus ad quinque, sessilibus.

CALYX: PERIANTHIUM quinquepartitum, laciniis obtusis, carnosis, basi tenuioribus.

COROLLA: PETALA quinque, flava, lanceolata, acuminata, calyce duplo longiora, patentia, *fig.* 2.

STAMINA: FILAMENTA decem, subulata, longitudine corollæ; ANTHERÆ subrotundæ, flavescens, *fig.* 3, 4.

PISTILLUM: GERMINA quinque, erecta, oblonga, definitia in STYLOS tenuiores; STIGMATA simplicia, *fig.* 5.

ROOT perennial and fibrous.

STALKS creeping at the base, those which produce flowers about three inches or more in height, round, smooth, dotted, below naked and of a reddish colour.

LEAVES oblong, fleshy, roundish, obtuse, upright, but bending a little outward, placed one over another in six rows, especially before the blossoms open, somewhat rigid, sessile, as if stuck to the stalk, those on the lower part of the stem of a reddish colour, on the upper part yellowish, at least on the flowering stalks, insipid.

CYMA generally divided into three branches, on each of which are placed from three to five flowers, without footstalks.

CALYX: a PERIANTHIUM divided into five segments, which are obtuse, fleshy, and slender at the base.

COROLLA: five yellow PETALS, lance-shaped, acuminate, spreading, twice the length of the calyx, *fig.* 2.

STAMINA: ten FILAMENTS, tapering, the length of the corolla; ANTHERÆ roundish, and of a yellowish colour, *fig.* 3, 4.

PISTILLUM: GERMINA five, upright, oblong, terminating in slender STYLES: STIGMATA simple, *fig.* 5.

In DJLLENIUS's edition of *Ray's Synopsis* this plant is omitted, and not considered even as a variety of the *Sedum acre*. Mr. HUDSON, in the first edition of his *Flora Anglica*, introduced it as a distinct species, in which he followed the opinion of LINNÆUS; in his last edition, without assigning any reason, he makes it a variety of the *Sedum acre*; HALLER, however, and SCOPOLI confirm LINNÆUS's opinion, and on such authority we surely may differ from Mr. HUDSON.

The constant want of that biting taste which gives the name of *Wall Pepper* to the *Sedum acre*, has been considered by many of our English Botanists sufficient to constitute this a distinct species; for though acrid plants may sometimes become mild, as in the *Hydropiper*, yet instances of that kind very rarely occur, but it is not in its taste alone that the *sexangulare* differs from the *acre*; in its leaves we shall find a satisfactory difference: on comparing these together as they grow on the flowering stems of both plants, we find those of the *acre* short, broad at the base, and at a considerable distance asunder, *vid. fig.* 1, while those of the *sexangulare* are nearly of the same thickness throughout, longer, and more numerous, *vid. fig.* 1; we may also add, that they are in general much redder; in the young shoots of the *sexangulare* the leaves form six rows or angles, which are sometimes straight and sometimes oblique; no traces of which are visible in the *acre*: another circumstance which adds some weight to the foregoing is, that the *acre* flowers a fortnight sooner than the *sexangulare*; the parts of the fructification afford little or no difference; indeed a great sameness in this respect runs through the whole genus.

We find this plant growing plentifully on Greenwich-Park wall, the south side, near the western corner.

It flowers about the latter end of June.

SPERGULA NODOSA. KNOTTED SPURREY.

SPERGULA *Lin. Gen. Pl.* DECANDRIA PENTAGYNIA.

Cal. 5-phyllus. *Petala* 5 integra. *Caps.* ovata, 1-locularis, 5-valvis.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SPERGULA *nodosa* foliis oppositis subulatis lævibus caulibus simplicibus. *Lin. Syst. Vegetab.* p. 363. *Sp. Pl.* p. 630.

ALSINE foliis superioribus fasciculatis. *Haller. Hist.* n. 871.

STELLARIA *nodosa.* *Scopoli Fl. Carn.* n. 545.

ALSINE *nodosa* Germanica. *Baub. Pin.* p. 251.

ALSINE palustris, ericæ folio, polygonoides, articulis crebrioribus, flore albo pulchello. *Pluk. alm.* 23. t. 7. fig. 4.

SAXIFRAGA palustris Anglica. *Park.* 427.

ALSINE palustris foliis tenuissimis, seu Saxifraga palustris Anglica. *Ger. emac.* 567. 568. *Raii Syn.* p. 350. English Marsh-Saxifrage. *Hudson Fl. Angl. ed.* 2. p. 203. *Lightfoot Fl. Scot.* p. 244.

RADIX perennis, fibrosa.

CAULES ex una radice plures, palmares et ultra, nunc procumbentes, nunc ascendentes, post florescentiam sæpe repentes, simplices seu ramosi, teretes, tenues, glabri, parce pilosi, pilis ad lentem globuliferis, crebris geniculis intercepti, geniculis tumidis.

FOLIA *radicalia* plurima, cæspitosa, læte virentia, linearia, acuta, uncialia, subcarnosa, glabra, caulina inferiora paulo breviora, connata, superiora brevissima, teretiuscula, fasciculata, ex alis prolifera.

FLORES albi, delicatuli, in summis caulibus et ramulis, majores quam pro plantulæ modo.

PEDUNCULI erecti, semipollicares.

CALYX: PERIANTHIUM pentaphyllum, foliolis oblongis, concavis, subpilosis, pilis ut in caule. *fig. 1.*

COROLLA: PETALA quinque, alba, calyce duplo longiora, ovato-rotundata, integerrima. *fig. 2.*

STAMINA: FILAMENTA decem, subulata, alba, corollæ breviora. ANTHERÆ concolores, incumbentes, primo bilobæ, lobis oblongis, parallelis. *fig. 3.*

PISTILLUM: GERMEN turbinatum. STYLI quinque, filiformes, villosuli, reflexi. STIGMATA simplicia, *fig. 4.*

PERICARPIUM: CAPSULA parva, ovata, calyce tecta, unilocularis, quinquevalvis.

SEMINA plurima, minima, nigricantia.

ROOT perennial and fibrous.

STALKS several from one root, four inches or more in length, sometimes procumbent, sometimes nearly upright, after flowering often creeping, simple or branched, round, slender, smooth, sparingly haired, the hairs appearing globular at top when magnified, having numerous joints which are swelled.

LEAVES next the root numerous, forming a turf, of a beautiful dark green colour, linear, pointed, about an inch in length, somewhat fleshy, smooth, the lowermost stalk-leaves a little longer than the radical ones, joined together at bottom, the uppermost stalk-leaves very short, from their alæ producing small tufts of leaves, the rudiments of branches.

FLOWERS white, and delicate, sitting on the tops of the stalks and branches, large in proportion to the size of the plant.

FLOWER-STALKS upright, about half an inch in length.

CALYX: PERIANTHIUM composed of five leaves, which are oblong, hollow, slightly hairy, the hairs like those on the stalk. *fig. 1.*

COROLLA composed of five white petals, twice the length of the calyx, of a roundish egg-shape, perfectly entire. *fig. 2.*

STAMINA: ten FILAMENTS tapering, white, shorter than the corolla. ANTHERÆ of the same colour, lying across the filament, at first composed of two oblong lobes parallel to each other. *fig. 3.*

PISTILLUM: GERMEN broad at bottom, narrow at top. STYLES five, filiform, slightly villous and reflexed. STIGMATA simple. *fig. 4.*

SEED-VESSEL: a small ovate CAPSULE covered with the calyx, of one cavity and five valves.

SEEDS numerous, very minute, of a blackish colour.

The *Spergula nodosa* recommends itself to our notice by the beauty of its verdure, and the delicacy of its blossoms; the largeness and whiteness of which, joined to its place of growth, serve also to distinguish it from those plants which may have some resemblance to it in their foliage.

It grows in moist situations, frequently among herbage, and sometimes out of Walls, Rocks, and Stones.

I have observed it growing out of the wall by the *Thames* side, in several places betwixt *Lambeth* and *Putney*.

I have also found it on *Hounslow Heath* with the *Sagina procumbens* and *Centunculus minimus*. It flowers in *July* and *August*.

About *London* it is a scarce plant; but in the north of *England* it is very common on the borders of rivulets, and grows generally more upright than with us: a small specimen of it, in this state, is represented on the plate.





Spergula saginoides.

subulata. - With.
SPERGULA SAGINOIDES. PEARLWORT SPURREY.

SPERGULA *Lin. Gen. Pl. DECANDRIA PENTAGYNIA.*

• *Cal. 5 phyllus. Petala 5, integra. Caps. ovata, 1-locularis, 5-valvis.*

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

SPERGULA *saginoides* foliis oppositis linearibus lævibus, pedunculis solitariis longissimis, caule repente.
Lin. Syst. Vegetab. p. 363. Sp. Pl. 631.

ALSINE *tenuifolia* pediculis florum longissimis. *Vaillant Botan. Paris, p. 8. a. 11.*

SPERGULA *laricina* foliis oppositis subulatis ciliatis fasciculatis, floribus pentandris. *Hudson Fl. Angl. ed. 2. p. 203.*

SPERGULA *laricina.* *Lightfoot Fl. Scot. p. 224.*

SAXIFRAGA *graminea* pusilla foliis brevioribus crassioribus et succulentioribus. *Raii Syn. p. 345?*

RADIX perennis, fibrosa.

CAULES ex una radice plures, pollicares aut bipollicares, basi procumbentes, et ut plurimum repentes, ramosi, teretes, pilis brevibus glanduliferis vix conspicuis vestiti.

FOLIA radicalia semipollicaria, linearia, acuta, mucrone albido terminata, saturate viridia, glabra, subcarnosa, superne nuda, inferne et ad oras pilosa, pilis glanduliferis; caulina breviora, connata, planiuscula, subsecunda. *fig. 1.*

PEDUNCULI suberecti, simplices, pollicares et ultra, teretes, ex fusco purpurascens, apice nutantes.

FLORES albi, pulchelli.

CALYX: PERIANTHIUM pentaphyllum, persistens, foliolis ovato-oblongis, concavis, obtusis, viscidulis, margine membranaceis. *fig. 2.*

COROLLA: PETALA quinque, alba, longitudine calycis, subrotunda, integerrima, patentia. *fig. 3.*

STAMINA: FILAMENTA quinque ad decem, sæpius vero quinque, subulata, longitudine germinis; ANTHERÆ parvæ, luteæ. *fig. 4.*

PISTILLUM: GERMEN obovatum; STYLI plerumque quinque, filiformia, villosa, reflexa; STIGMATA simplicia. *fig. 5.*

PERICARPIUM: CAPSULA uni-locularis, quinque-valvis, calyci insidens.

SEMINA plurima, minima, fusca, ad lentem punctata. *fig. 7, 8.*

ROOT perennial and fibrous:

STALKS, several arise from one root, an inch or two in length, procumbent, and generally creeping at bottom, branched, round, covered with short glandular hairs, scarcely visible.

LEAVES next the root about half an inch in length, linear, sharp and terminated by a whitish point or bristle, of a deep green colour, somewhat shining, and rather fleshy, on the upper side smooth, on the under side, and at the edge, hairy, the hairs terminated by little glands, those of the stalk shorter, growing together at the base, flattish, and tending somewhat one way. *fig. 1.*

FLOWER-STALKS somewhat upright, simple, an inch or more in length, round, of a brownish purple colour, nodding at top.

FLOWERS white and pretty.

CALYX: a PERIANTHIUM of five leaves, permanent, the leaves oval, hollow, obtuse, somewhat viscid, the edge membranous. *fig. 2.*

COROLLA: five white PETALS, the length of the calyx, of a roundish shape, entire at the edge and spreading. *fig. 3.*

STAMINA: FILAMENTS from five to ten, but most commonly five, tapering, the length of the germen; ANTHERÆ small and yellow. *fig. 4.*

PISTILLUM: GERMEN inversely ovate; STYLES generally five, thread-shaped, villous and turned back; STIGMATA simple. *fig. 5.*

SEED-VESSEL: a CAPSULE of one cavity, and three valves fitting on the calyx. *fig. 6.*

SEEDS numerous, very small and brown, appearing dotted when magnified. *fig. 7, 8.*

We are led to consider this plant as the *Spergula saginoides* of LINNÆUS, from its according exactly with a minute description given of it by VAILLANT in his *Botanicon Parisiense* *, to which the former refers, and surely no name was ever more aptly applied, for did not its conspicuous petals proclaim it, it might for ever have passed for the *Sagina procumbens*; these lead us to the plant, and examination proves it to be a *Spergula*, inconstant indeed like many other plants in the number of its stamina.

In its generic character this species of *Spergula* differs in number only from the *Sagina procumbens*, it agrees particularly with it in the form of its capsules, size, and shape of its seeds, but two obvious specific characters at once distinguish them, these are the size of the petals, and the peculiar hairiness of the whole plant; in the *Sagina procumbens* the petals are very small, being much shorter than the calyx, whence they are inconspicuous; in the *Spergula* they are of the same length as the calyx, and, when expanded, become very conspicuous; the *Sagina procumbens* (which must not be confounded with the *apetala* LINNÆI) is smooth, while the *Spergula* has its stalks, leaves, peduncles and calyx covered with short hairs, having little globules at their extremities, and which are very distinguishable when magnified.

It is not uncommon on *Putney Heath*, and in similar situations about *Coomb Wood, Surry*; Dr. GOODENOUGH discovered it plentifully on *Bagshot Heath*, especially on some banks thrown up on *Potnell Warren*, near the great Bog at *Virginia Water*; Mr. LIGHTFOOT shewed it me several years ago on *Uxbridge Moor*; and Mr. HUDSON mentions it as growing about *Cobham* and *Essex* in *Surry*. It flowers from June to August.

* Cette plante a le port & les feuilles de l' *Alsine minima flore fugaci*. J. R. H. mais elle s'élève plus haut. Les tiges et les pedicules des fleurs sont ordinairement brunes. Sa fleur n'a qu'environ 2 lignes de diamètre. Elle est à 5 petales blancs, entiers ronds, qui ne débordent point le calice & qui sont opposés à ses cantons. Le pistille est un petit bouton tirant sur l'ovale, vert pâle, surmonté de 5 styles blancs, courts distants en étoile, & entourés de 10 Etamines blanches ainsi que leurs sommets. Ces Etamines n'ont pas une ligne de long. Le calice est parsemé de petits poils très courts. Il est découpé en étoile à 5 parties égales. Cette plante ne s'élève que depuis 2 jusqu'à 4 pouces, elle pousse ordinairement plusieurs tiges de sa racine, lesquelles se couchent d'abord sur la terre, & sont droites dans le rest de leur longueur. Ses feuilles sont lisses, vertes, roides, dures et ressemblent assez bien à celles du Knapel ou de l' *Alsine minima flore fugaci*. Elle commence à fleurir vers la fin de May & continue en Juin & Juillet. Elle se trouve dans les friches qui sont au de la St. Leger entre la forêt et le Village de St. Lucien le long du chemin. Elle n'a que le goût d'herbe. Son fruit s'ouvre ordinairement en 4 & quelquefois 5 lobes de la pointe vers la base & contient dans sa cavité plusieurs semences noirâtres très menues. *Botan. Par. p. 8, 9.*

EUPHORBIA EXIGUA. SMALL SPURGE.

EUPHORBIA *Lin. Gen. Pl.* DODECANDRIA TRIGYNIA.

Cor. 4 f. 5-petala, calyci infidens. *Cal.* 1-phyllus, ventricosus. *Caps.* 3-cocca.

Raii Syn. Gen. 22. HERBÆ VASCULIFERÆ, FLORE TETRAPETALO ANOMALÆ.

EUPHORBIA *exigua* umbella trifida : dichotoma : involucellis lanceolatis, foliis linearibus. *Lin. Syst. Vegetab.* p. 375. *Sp. Pl.* p. 654.

TITHYMALUS foliis linearibus; stipulis lanceolatis aristatis. *Haller Hist.* n. 1048.

TITHYMALUS five Esula exigua. *Bauh. Pin.* p. 295.

ESULA exigua Tragi. *Ger. emac.* 502.

TITHYMALUS leptophyllus. *Parkins.* 193. *Raii Syn.* 313. Dwarf Spurge, or small annual Spurge. *Hudson Fl. Angl. ed. 2.* p. 208. *Lightfoot Fl. Scot.* p. 250.

RADIX annua, simplex, paucis fibrillis instructa.
CAULIS erectus, ramosus, foliosissimus, semipedalis.
RAMI plerumque inferiorem partem caulis tantummodo occupant, oppositi, suberecti.
FOLIA plurima, appressa, linearia, obtusiuscula.
UMBELLA trifida, interdum quadrifida, rarius quinquefida, dichotoma.
STIPULÆ Umbellæ lanceolato-lineares:
——— Umbellulæ ovato-oblongæ, acuminatæ, oppositæ, sæpe inæquales.
CALYX glabra, persistens. *fig. 1. auct.*
COROLLA nulla.
NECTARIA quatuor, corniculata, fusca. *fig. 2, 3.*
STAMINA plerumque duo visibilia; ANTHERÆ didymæ. *fig. 4.*
PISTILLUM: GERMEN subrotundum, petiolatum, nutans; STYLI tres; STIGMA bifidum. *fig. 5, 6.*
PERICARPIUM: CAPSULA tricocca, trilocularis.
SEMEN unicum in singulo loculamento, nigrum, rugosum.

ROOT annual, simple, furnished with few fibres.
STALK upright, branched, very leafy, about six inches high.
BRANCHES generally occupy the lower part of the stalk only, are opposite and nearly upright.
LEAVES numerous, pressed to the stalk, linear, and somewhat obtuse.
UMBELL dividing into three branches, sometimes four, rarely five, those forked.
STIPULÆ of the *general Umbell* of a shape betwixt lanceolate and linear.
——— of the *partial Umbell*, of an oblong, ovate shape, running out to a point, opposite, and often irregular.
CALYX smooth, and permanent. *fig. 1. magnified.*
COROLLA wanting.
NECTARIES four, of a brownish colour, each furnished with two little horns. *fig. 2, 3.*
STAMINA generally about two visible; ANTHERÆ double. *fig. 4.*
PISTILLUM: GERMEN roundish, standing on a footstalk, and drooping; STYLES three; STIGMA bifid. *fig. 5, 6.*
SEED-VESSEL, a Capsule with three prominent sides, and three cavities.
SEED: a single one in each cavity, black, and wrinkled.

This small and delicate species of Spurge is often found in Corn-fields about *London*, especially on the *Surry* side of the *Thames*, nor is it uncommon in many other parts of *England*.

It flowers in *July* and *August*.

The *Tithymalus segetum longifolius* of *RAY*, considered by Professor *MARTYN* in his *Plant. Cantab.* as the *segetalis* of *LINNÆUS*, has by some been thought to be no other than a large specimen of this plant; Mr. *HUDSON* makes it a variety of the *platyphyllos*; supposing such a plant as the *segetalis* to exist, it cannot be a variety of the *exigua* because it has rough Capsules, and its leaves are by far too narrow for the *platyphyllos*, vid. *JACQUIN Fl. Austr. V.* 3. & 4. who figures them both, and considers them as distinct species.



Euphorbia exigua.



Clematis Vitalba.



CLEMATIS VITALBA. TRAVELLER'S JOY.

CLEMATIS *Lin. Gen. Pl.* POLYANDRIA PENTAGYNIA.

Cal. o. Petala 4. rarius 5. Sem. caudata.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

CLEMATIS *Vitalba* foliis pinnatis : foliolis cordatis scandentibus. *Lin. Syst. Vegetab. p. 426. Spec. Pl. 766.*

CLEMATIS caule scandente, foliis pinnatis, ovato lanceolatis, petalis coriaceis. *Haller Hist. n. 1142.*

CLEMATIS *Vitalba. Scopoli Fl. Carn. p. 669.*

CLEMATIS *sylvestris latifolia. Baub. Pin. 300.*

CLEMATIS *latifolia feu Atragene quibusdam. J. B. II. 125.*

CLEMATIS *sylvestris latifolia feu Viorna. Parkins. 380.*

VIORNA *Ger. emac. 886. Raii Syn. 258. Great Wild Climber, or Traveller's Joy. Hudson Fl. Angl. ed. 2. p. 238.*

CAULES plurimi, perennantes, ope petiolorum, frutices arboresque vicinos, scandentes; junioribus hirsutulis, flexilibus, purpureis, nodis incrassatis; per ætatem crassitie digiti seu pollicis, profunde fulcatis, exalbidis, fruticosis.

FOLIA pinnata, opposita, patentia; pinnis duorum parium cum impari, remotis, cordatis, subacuminatis, integris, serratis, lobatisve, e viridi flavescentibus, nitidulis, subtus venosis.

PETIOLI contorti, vicem cirrhi supplentes.

RACEMI florales ex foliorum alis, conjugati, foliosi, ramosi, trifidi, dichotomi.

FLORES pallide sulphurei, odorati.

CALYX nullus.

COROLLA: PETALA quatuor, cruciata, oblonga, submarginata, patentia, subrevoluta, villosa, superne pallide sulphurea, inferne virescentia. *fig. 1.*

STAMINA: FILAMENTA plurima, filiformia, subcompressa, alba, longitudine corollæ, erecta; ANTHERÆ oblongæ, albidæ. *fig. 2.*

PISTILLUM: GERMINA plurima, minima, subrotunda, compressa, definitia in tot STYLOS subulatos, sericeos, longitudine staminum; STIGMATA simplicia. *fig. 3.*

SEMINA plurima, nuda, subrotunda, compressa, caudata. *fig. 4.*

STALKS numerous, perennial, by means of the leaf-stalks climbing the adjoining shrubs and trees, the younger ones slightly hirsute, flexible, purple; the joints enlarged; by age attaining the thickness of the finger or thumb, deeply grooved, of a whitish colour and shrubby.

LEAVES pinnated, opposite, spreading, the pinnæ consisting of two pair with an odd one, heart-shaped, remote from each other, and running out to a point, either entire, serrated, or lobed, of a yellowish green colour, somewhat shining, and veiny on the under side.

LEAF-STALKS twisted, answering the purpose of a tendril.

FLOWERING-BRANCHES proceeding from the axæ of the leaves, in pairs, leafy, branched, dividing first into three, and then into two smaller branches.

FLOWERS of a pale sulphur colour, and sweet-scented.

CALYX none.

COROLLA: four PETALS cross-shaped, oblong, slightly nicked at the end, spreading, somewhat rolled back, villous, on the upper side of a pale sulphur colour, underneath greenish. *fig. 1.*

STAMINA: FILAMENTS numerous, filiform, somewhat flattened, white, the length of the corolla, upright; ANTHERÆ oblong, whitish. *fig. 2.*

PISTILLUM: GERMINA numerous, very minute, roundish, flattened, terminating in as many tapering, silky STYLES, the length of the stamina; STIGMATA simple. *fig. 3.*

SEEDS numerous, naked, roundish, flattened, and terminated by a long feathered tail. *fig. 4.*

The *Clematis** *Vitalba*† is a very common plant in the more southern parts of *Europe*, it delights in a situation that is elevated, and in a soil that is chalky, hence it is found more plentifully in some counties than in others; it is not frequent very near *London*, but abounds in the hedges around *Croydon*, and may be found, though more sparingly, about *Charlton*, also on the left hand side of the road leading from New-Cross Turnpike to *Lerwisham*, near the spot where the *Dipsacus pilosus* grows: it flowers in *August*, and ornaments the hedges with its large branches of downy seeds† till the approach of winter.

Being a Climber, handsome both in its foliage and seeds, and rapid in its growth, it is often made use of for Arbours and Bowers in Gardens and Pleasure-Grounds; for this purpose young plants should be chosen raised from seeds. This quality, which is an useful one under proper restrictions, often becomes a noxious one in hedges, where it is apt to suffocate and destroy those trees and shrubs which are planted for defence.

School-boys often dry the stems, when about the thickness of the finger, and draw smoke through them instead of cane. The Farmer also uses the green stalks to fasten his gates with, &c.

HALLER quotes several authorities to shew the *Clematis* possessed of considerable acrimony, sufficient even to raise blisters on the skin, for which purpose it has sometimes been employed medicinally. A plant of the same genus, viz. *Flammula fœvis* (*Clematis recta* *Linnaei*) has been introduced into the last edition of the *Edinburgh Dispensatory*, on the authority of Dr. STORCK, who recommends the leaves to be externally applied, in sordid, ichorous, fungous, and cancerous ulcers, and caries of the bones; and preparations of them to be taken internally in the head-ach, nocturnal pains of the bones, venereal disease, itch and melancholy.

* So called from κλημα, *farmentum*, a vine twig.

† Hence in some parts of *England* the plant is called *Old Man's beard*.

† Quasi *Vitis alba*, or white Vine.

RANUNCULUS REPENS. CREEPING CROWFOOT.

RANUNCULUS *Lin. Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 5-phyllus. *Petala* 5 intra ungues poro mellifero. *Sem.* nuda.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *repens* calycibus patulis, pedunculis fulcatis, stolonibus repentibus, foliis compositis: *Lin. Syst. Vegetab.* p. 430. *Fl. Suec.* n. 505. *Sp. Pl.* 779.

RANUNCULUS caule repente radicato, foliis semitrilobatis, lobis petiolatis. *Haller. Hist.* 1173.

RANUNCULUS *repens.* *Scopoli Fl. Carn.* n. 689.

RANUNCULUS *pratensis repens hirsutus.* *Bauh. pin.* 179.

RANUNCULUS *pratensis repens.* *Parkinsf.* 329.

RANUNCULUS *pratensis etiamque hortensis.* *Ger. emac.* 951. *Raii Syn.* p. 247. Common creeping Crowfoot, or Butter-cups. *Hudson Fl. Angl. ed. 2.* p. 240. *Lightfoot Fl. Scot.* p. 292.

RADIX plurimis fibris albescentibus constat.

CAULES ex una radice plerumque plures, pedales et ultra, variae magnitudinis, pro ratione loci, teretiusculi, hirsuti, repentes.

PETIOLI longi, hirsuti, ad basin dilatati.

FOLIA plerumque utrinque hirsuta (etiam glabra occurrunt) maculis albis subinde notata, trilobata, lobis petiolatis, bi et tripartitis, lobulis acute dentatis.

RAMI floriferi erecti, saepius biflori.

PEDUNCULI pubescentes, striati.

CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, concavis, patentibus, pilosis, flavescentibus, margine membranaceis, deciduis. *fig. 1.*

COROLLA: PETALA quinque, obcordata, patentia, flava, interne nitida. *fig. 2.*

NECTARIUM: Squamula parva, rotundata, ad basin cujusvis petali. *fig. 3.*

STAMINA: FILAMENTA plurima, ultra triginta, receptaculo inserta, apice paululum dilatata; ANTHERÆ oblongo-lineares, compressæ, incurvatae, flavæ. *fig. 4.*

PISTILLUM: GERMINA plurima, in capitulum collecta, compressa, erecta; STYLIS brevibus, acuminatis, apice reflexis terminati; STIGMATA simplicia. *fig. 5.*

SEMEN compressum, laeve, mucronatum. *fig. 6.*

ROOT consists of numerous whitish fibres.

STALKS generally several from one root, a foot or more in length, varying in size according to the place of growth, roundish, beset with rough hairs, and creeping.

LEAF-STALKS long, hairy and dilated at the base.

LEAVES generally hairy on both sides (sometimes they are found smooth and shining) frequently marked with white spots, composed of three lobes, or smaller leaves which have footstalks, these are divided into two or three segments, and sharply notched.

FLOWER-BRANCHES upright, generally supporting two flowers.

FLOWER-STALKS downy and striated.

CALYX: a PERIANTHIUM of five leaves, which are ovate, concave, spreading, hairy, yellowish, membranous at the edge, and deciduous. *fig. 1.*

COROLLA: five PETALS, inversely heart-shaped, spreading, yellow, shining on the inside. *fig. 2.*

NECTARY a small roundish Scale at the base of each petal. *fig. 3.*

STAMINA: FILAMENTS numerous, upwards of thirty, inserted into the receptacle, dilated a little at top; ANTHERÆ oblong and somewhat linear, flattened, bent inward, and yellow. *fig. 4.*

PISTILLUM: GERMINA numerous, collected into a little head, flattened and upright; terminated by short, pointed STYLES, which turn back at top, STIGMATA simple. *fig. 5.*

SEED flat, smooth, with a small point. *fig. 6.*

The *Ranunculus bulbosus* is a very noxious plant in dry pastures, as the *acris* is in the moist, and some of the best meadows about town; but where the *repens* abounds, it is more mischievous than either of those, and it is a plant so general in its growth, that few meadows or pastures are entirely free from it; it differs from the other two Crowfoots, in having stalks which run along the ground, and at every joint sending forth roots, and being a plant that will thrive in almost any soil, it is very apt to become the principal plant of the pasturage, to the great detriment of the farmer, as cattle in general have the greatest aversion to the Crowfoots.

From the astonishing diversity of soil and situation in which this plant is found, the varieties which it assumes are almost endless; by the Thames side it will grow three or four feet high, with a stem nearly as large as one's thumb; in barren, gravelly fields, it is entirely procumbent, with a stalk not larger than a small wheat straw, but in all its various states I have ever found it to have a creeping stalk, and this is a character which it does not lose by cultivation. HALLER, misled by his pupil WILLICH*, who since has retracted his error, suspected it to be a variety of the *bulbosus*, but the *bulbosus* was never known to creep, this does wherever its stalk can touch the ground.

Its principal time of flowering is in the month of June, but it may be found in blossom during most of the remaining summer months.

Like the *acris* and *bulbosus* it is sometimes found double, but more rarely.

* XXXV *Ranunculum bulbosum* non in *repentem* mutari, ut in *Observationibus Botanicis* a. 1747. p. 4. scripseram, superiores observationes docuerunt. Utraque planta diversitates suas constantes retinet, ab ILL. LINNÆO nominibus specificis optime expressas. *Observat. de plant. quibusd. Colting.* 1762.

Ranunculus repens



W. & A. Nichol

RANUNCULUS HEDERACEUS. IVY-LEAVED CROWFOOT.

RANUNCULUS *Lin. Gen. Pl.* POLYANDRIA POLYGYNIA.

Cal. 5-phyllus. *Petala* 5 intra ungues poro mellifero. *Sem.* nuda.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

RANUNCULUS *hederaceus* foliis subrotundis trilobis integerrimis, caule repente. *Lin. Syst. Vegetab.* p. 431. *Spec. Pl.* p. 781.

RANUNCULUS *aquaticus hederaceus luteus.* *Bauh. Pin.* 180.

RANUNCULUS *hederaceus rivulorum se extendens, atra macula notatus.* *I. B. III.* 782.

RANUNCULI *aquatilis varietas altera.* *Ger. emac.* 830.

RANUNCULUS *hederaceus aquaticus.* *Park.* 1216.

RANUNCULUS *aquatilis hederaceus albus.* *Raii Syn.* p. 249. *Hudson Fl. Angl.* p. 243. *Lightfoot Fl. Scot.* p. 294. *Oeder Fl. Dan. ic.* 219.

RADICES plurimi, simplices, albidī, in limum profunde demissi.	ROOTS numerous, simple, whitish, penetrating deeply into the mud.
CAULES plurimi, teretes, solidi, geniculati, crassiusculi, repentes, late diffusi.	STALKS numerous, round, solid, jointed, thickish, creeping, spreading wide.
FOLIA petiolata, plerumque quinquelobata, subcarnosa, nitida, avenia.	LEAVES standing on foot-stalks, generally divided into five lobes, somewhat fleshy, shining, and veinless.
PETIOLI ad basin vagina magna, membranacea instructi.	LEAF-STALKS at the base furnished with a large membranous sheath.
PEDUNCULI axillares, petiolis breviores, uniflori, primo erecti, peractā florentiā versus terram recurvati.	FLOWER-STALKS proceeding from the axæ of the leaves shorter than the leaf-stalks, supporting one blossom, at first upright, after the flowering is over, turned back towards the ground.
FLORES parvi albi.	FLOWERS small and white.
CALYX: PERIANTHIUM pentaphyllum, foliolis ovatis, margine membranaceis, flavescentibus. <i>fig. 1.</i>	CALYX: a PERIANTHIUM of five leaves, which are ovate, membranous and yellowish at the edges. <i>fig. 1.</i>
COROLLA: petala quinque alba, oblonga, obtusiuscula, calyce longiora. <i>fig. 2.</i>	COROLLA: five white PETALS of an oblong shape, somewhat obtuse, and larger than the calyx. <i>fig. 2.</i>
NECTARIUM: Porus nudus prope basin cujusvis petali. <i>fig. 3.</i>	NECTARY: a naked pore at the base of each petal. <i>fig. 3.</i>
STAMINA: FILAMENTA quinque ad decem. ANTHERÆ oblongæ, flavæ. <i>fig. 4.</i>	STAMINA: FILAMENTS from five to ten. ANTHERÆ oblong and yellow. <i>fig. 4.</i>
SEMINA plurima, obtusa, <i>fig. 5.</i> in capitula subrotunda, vicinæ vulgaris magnitudine fere, dense stipata.	SEEDS numerous, blunt, <i>fig. 5.</i> crowded together in roundish heads, about the size of the common tare.

Neither LINNÆUS, HALLER, nor SCOPOLI, mention this plant in their respective Flora's. OEDER figures it in the *Flora Danica*: the plant he gives us appears as if it had grown in water of some depth; with us it is most commonly found spreading widely on the mud of flow shallow rivulets, especially where the soil is sandy.

It flowers during most of the summer months.

We sometimes meet with the leaves having a dark spot in the middle of each, and in some situations the blossoms are much larger than in others.

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Ranunculus hederaceus.



Galeobdolon Galeopsis.

Luteum With. GALEOBDOLON GALEOPSIS. YELLOW ARCHANGEL.

GALEOBDOLON *Hudson Fl. Angl.* DIDYNAMIA GYMNOSPERMIA.

Raii Syn. Gen. 24. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

GALEOBDOLON *luteum.* *Hudson. Fl. Angl. ed. 2.* p. 258.

GALEOPSIS *Galeobdolon verticillis sexfloris; involucri tetraphyllo.* *Lin. Syst. Vegetab.* p. 446. *Spec. Pl.* p. 810.

CARDIACA foliis petiolatis; cordatis, verticillis foliosis. *Haller. Hist.* 275.

LEONURUS *Galeobdolon.* *Scopoli Fl. Carn.* n. 705.

LAMIUM folio oblongo luteum. *Baub. Pin.* 231. *Lamium luteum.* *Ger. emac.* 671. *Parkins* 606. *Raii Syn.* p. 240. Yellow Archangel or Dead Nettle.

GALEOPSIS *Galeobdolon.* *Lightfoot Fl. Scot.* p. 310.

RADIX perennis, inæqualis, fibras plurimas, majusculas, in terram demittens.

CAULES plures, tetragoni, hirsutuli, floriferi suberecti, pedales seu bipedales, steriles peractâ florescentiâ, in longum extenduntur, et postea humi repent.

FOLIA opposita, petiolata, hirsutula, inæqualiter serrata, venosa, inferioribus cordatis, superioribus ovatis, acutis, sessilibus.

FLORES verticillati, lutei.

VERTICILLI sex, decem aut duodecim flori.

CALYX: *Involucrum* verticillis subjectum, foliolis tot quot floribus, linearibus, acutis, rigidulis, ad lentem ciliatis, fig. 2.

CALYX: PERIANTHIUM monophyllum, subcampanulatum, quinque-dentatum, hirsutulum, lineis decem elevatis notatum, alternis obsoletis, dentibus subæqualibus, acuminatis, superiore erecto, distanti, duobus inferioribus reflexo-patulis. fig. 1.

COROLLA monopetala, ringens; *tubus* calyce paulo longior, intus purpureus et pilosus; *labium superius* erectum, longum, fornicatum, villosum, villisque ciliatum; *inferius* trifidum, laciniis inæqualibus, maculatis, mediâ productiore. fig. 3, 4.

STAMINA: FILAMENTA quatuor, subulata, flava, sub labio superiore. ANTHERÆ bilobæ, purpurascens. POLLEN albidum. fig. 5, 6.

PISTILLUM: GERMEN quadripartitum. STYLUS filiformis, purpureus. STIGMA bifidum, acutum. fig. 7.

SEMINA quatuor, e fusco nigricantia, nitidula, triquetra, apice truncata in fundo calycis. fig. 9.

ROOT perennial, irregular, sending down several largish fibres.

STALKS several, four-cornered, somewhat hirsute; those producing flowers nearly upright, a foot or two feet high; those destitute of blossoms, after the flowering is over, are extended to a great length, and afterwards creep on the ground.

LEAVES opposite, standing on foot-stalks, slightly hirsute, unevenly serrated, and veiny; the lower ones heart-shaped, the upper ones ovate, pointed, and sessile.

FLOWERS growing in whirls, of a yellow colour.

WHIRLS containing from six to ten or twelve flowers.

CALYX: an *Involucrum* placed under the whirls, composed of as many leaves as there are flowers, the leaves linear, pointed, somewhat rigid, when magnified fringed at the edge. fig. 2.

CALYX: a PERIANTHIUM of one leaf, somewhat bell-shaped, having five teeth, slightly hirsute, marked with ten elevated lines, alternately faintest, the teeth nearly equal, having long points, the uppermost upright, and at a distance from the rest; the two lowermost spreading open and turned somewhat back. fig. 1.

COROLLA monopetalous and ringent; *tube* a little longer than the calyx, purple and hairy within; *upper lip* upright, long, arched, villous, and edged with woolly hairs; the lowermost divided into three unequal segments which are spotted, the middle one longest. fig. 3, 4.

STAMINA: four FILAMENTS tapering, of a yellow colour, under the upper lip. ANTHERÆ composed of two lobes and purplish. POLLEN whitish. fig. 5, 6.

PISTILLUM: GERMEN divided into four parts. STYLE filiform and purple. STIGMA bifid and pointed. fig. 7.

SEEDS four, of a brownish black colour, somewhat shining, three cornered, cut off at top, remaining in the bottom of the calyx. fig. 9.

LINNÆUS, though he enumerates this plant with the *Galeopsis* tribe, seems to think it not perfectly reconcileable with the rest. HALLER and SCOPOLI disagree in their opinions respecting it; the one considering it as a *Cardiaca*, the other as a *Leonurus*. Mr. HUDSON, whom we have followed in this instance, in the last edition of his *Flora Anglica*, makes a separate genus of it under the name of *Galeobdolon*; we adopt the trivial name of *Galeopsis* instead *luteum*, with a view of making as little innovation as possible in names.

It is always found in woods and shady places. In some parts of *England* it is frequent, but not in others: we find it tolerably plentiful in *Charlton*, and some other Woods about town, flowering in *May* and *June*.

The foliage is sometimes variegated, in which state I have observed it make a beautiful appearance in a garden. In cultivating this, as well as all other plants, attention should be paid to their natural place of growth.



Stachys arvensis.

STACHYS ARVENSIS. CORN STACHYS.

STACHYS *Lin. Gen. Pl. DIDYNAMIA GYMNOSPERMIA.*

Corollæ lab. super. fornicatum, lab. inferius lateribus reflexum: intermedia majore emarginata. *Stamina* deflorata versus latera reflexa.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

STACHYS *arvensis* verticillis sexfloris, foliis obtusis nudiusculis, corollis longitudine calycis, caule debili. *Lin. Syst. Vegetab. p. 448. Sp. Pl. p. 814.*

GLECOMA *arvensis. Lin. Fl. Suec. n. 512. Hudson Fl. Angl. ed. 1. p. 224. upright Ground-ivy.*

TRIXAGO foliis ovatis, cordatis, rotunde dentatis, hirsutis. *Haller. Hist. n. 231.*

SIDERITIS alfinis trixaginis folio. *B. Pin. 233.*

SIDERITIS hederulæ folio. *Park. 587.*

SIDERITIS humilis lato obtuso folio. *Gerard. emat. 699.*

STACHYS *arvensis minima. Riv. Irr. Mon. icon. Raii Syn. p. 242. Hudson Fl. Angl. ed. 2. p. 260. Corn Stachys. Lightfoot Fl. Scot. p. 314. petty Iron-wort or All-heal. Oeder Fl. Dan. t. 587.*

RADIX annua, fibrosa.

CAULIS spithamæus seu pedalis, inter segetes, ubi nobiscum sæpius invenitur, erectus (procumbens seu debilis rarius observatur) ramosus, tetragonus, hirsutus. *Rami* alterni, oppositi.

FOLIA opposita, petiolata, ovato-cordata, obtusa, venosa, hirsuta, obtuse serrata, summa sessilia.

FLORES parvi, carnei, verticillati, spicati.

VERTICILLI circiter sexflori.

CALYX: PERIANTHIUM quinque-dentatum, persistens, patens, hirsutum. *fig. 1.*

COROLLA ringens, parva, calyce paulo longior, pallide purpurea, labio superiore brevior, obtuso, integro, inferiore trifido, laciniis lateralibus brevioribus, media majori, rotundata. *fig. 2.*

STAMINA: FILAMENTA quatuor, quorum duo breviora, inferne alba, superne purpurea; ANTHERÆ nigricantes; POLLEN flavum. *fig. 3.*

PISTILLUM: GERMEN quadripartitum, viride. STYLUS longitudine staminum. STIGMA bifidum, acutum. *fig. 4.*

SEMINA quatuor intra calycem, virescentia, nigro punctata. *fig. 5.*

ROOT annual and fibrous.

STALK a span or a foot in height, among the corn where it is generally found with us upright, (it is more rarely found weak or procumbent), branched, four cornered, hirsute. *Branches* alternately opposite.

LEAVES opposite, standing on foot-stalks, ovate, with an heart-shaped base, obtuse, veiny, hirsute, bluntly serrated, the uppermost ones sessile.

FLOWERS small, flesh-coloured, growing in whirls, and forming a spike.

WHIRLS containing six flowers in each.

CALYX: PERIANTHIUM with five teeth, permanent, projecting horizontally, and hairy. *fig. 1.*

COROLLA ringent, small, a little longer than the calyx, of a pale purple colour, the upper lip short, blunt, and entire; the lower one divided into three segments, of which the two side ones are the shortest, the middle one large and roundish. *fig. 2.*

STAMINA: four FILAMENTS, two of which are shorter than the rest, white below, and purple above; ANTHERÆ blackish; POLLEN yellow. *fig. 3.*

PISTILLUM: GERMEN divided into four parts, of a green colour. STYLE the length of the stamina. STIGMA bifid and pointed. *fig. 4.*

SEEDS four within the calyx, of a greenish colour, dotted with black. *fig. 5.*

Botanists, both ancient and modern, seem to have been at a loss with what genus of plants they should class this small inhabitant of our Corn-fields. At various times, and by various authors, it has been called a *Sideritis*, a *Lamium*, a *Marrubiastrum*, a *Glechoma*, a *Stachys*, and a *Trixago*. It appears neither to possess the striking characters of any other genus, nor to afford sufficient distinction to form a genus by itself. As a species, however, there is no difficulty about it; its place of growth, the smallness of its flowers, and form of its leaves, obviously distinguish it from any other English plant.

It is not uncommon in the Corn-fields about the Oak of Honour and Coomb Woods, and elsewhere about London; it flowers in June, July, and August.



Prunella vulgaris

PRUNELLA VULGARIS.

SELF-HEAL.

PRUNELLA *Lin. Gen. Pl. DIDYNAMIA GYMNOSPERMIA.*

Filamenta bifurca: altero apice antherifero. Stigma bifidum.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

PRUNELLA *vulgaris* foliis omnibus ovato-oblongis ferratis petiolatis. *Lin. Syst. Vegetab. p. 458. Sp. Pl. 837. Fl. Suec. 540.*

BRUNELLA foliis ovatis oblongis calycibus superne truncatis. *Haller. Hist. n. 277.*

BRUNELLA *vulgaris. Scopoli Fl. Carn. 715.*

PRUNELLA major folio non dissecto. *Bauh. pin. 260.*

PRUNELLA *Gerard. emac. 631.*

PRUNELLA *vulgaris. Parkins. 1680. Raii Syn. p. 238. Common Self-heal. Hudson. Fl. Angl. ed. 2. p. 264. Lightfoot Flor. Scot. p. 321.*

RADIX annua, fibrosissima.

CAULIS dodrantalis, pedalis et ultra, erectus, ad basin usque ramosus, geniculatus, geniculis inferioribus radican- tibus, subquadratus, utrinque canaliculatus, hirsutus, purpurascens.

RAMI cauli similes, adscendentes, alterne oppositi, inferioribus longioribus.

FOLIA opposita, petiolata, ovata, plana, patentia, punctis prominulis scabriuscula, obsolete dentata potius quam ferrata.

PETIOLI superne canaliculati, marginibus hirsutis.

SPICÆ terminales, sessiles, subcylindricæ, pollicares, truncatæ, e floribus verticillatis breviter pedicellatis et bractæis constantes.

BRACTEÆ cordatæ, latæ, acuminatæ, subdiaphanæ, venosæ, ciliatæ, subtus hirsutæ, supra glabræ.

VERTICILLI sexflori.

CALYX: PERIANTHIUM tubulatum, bractæis paulo longius, biangulatum, supra glabrum, trinerveum, subtus striatum, angulis ciliatis, bilabiatum; labio superiore depresso-plano, truncato, crenato, minutim tridentato, lateribus planis, inferiore angustiore, bifido, laciniis acuminatis. *fig. 1.*

COROLLA violacea, caduca, monopetala, ringens, pars tubulosa calyce paulo longior, labium superius concavum, integrum, superne villosum, inferius trifidum, laciniis lateralibus integris, deflexis, intermedia erecta, rotundata, denticulata. *fig. 2.*

STAMINA: FILAMENTA quatuor, subulata, violacea, bifurca, quorum duo breviora; ANTHERÆ bilobæ, lobis divergentibus, furcâ interiore infidentes. *fig. 3.*

PISTILLUM: GERMEN quadripartitum, glandulâ crenatâ cinctum; STYLUS filiformis, longitudine staminum; STIGMA bifidum, acutum. *fig. 4, 5, 6, 7.*

SEMINA quatuor, ovata, parva, obtuse angulata, glabra, fusca, mucrone albo terminata. *fig. 8.*

ROOT annual, and exceedingly fibrous.

STALK from half a foot, to a foot or more in height, upright, branched quite down to the bottom, jointed, the lowermost joints sending down roots, somewhat square, with a deep groove on each side, rough and purplish.

BRANCHES like the stalk, bending upward, alternately opposite, the lower ones longest.

LEAVES opposite, standing on footstalks, ovate, flat, spreading, rough with little prominent points, faintly indented on the edge, rather than sawed.

LEAF-STALKS hollow above, and hairy on the edges.

SPIKES terminal, sessile, somewhat cylindrical, about an inch in length, as if cut off at top, composed of floral leaves and flowers standing on short footstalks.

FLORAL-LEAVES heartshaped, broad and pointed, somewhat transparent, veiny, edged with hairs, hirsute on the under side, smooth and shining above.

WHIRLS six flowers in each.

CALYX: a tubular PERIANTHIUM, somewhat longer than the floral-leaves, angular on each side, smooth above, with three faint ribs, striated below, the angles edged with hairs, composed of two lips, the uppermost of which is flat, and somewhat depressed, cut off at top, terminated by three small teeth, the sides flat, the lower lip narrower, bifid, the segments long and pointed. *fig. 1.*

COROLLA of a violet colour, easily falling, monopetalous and ringent, the tubular part a little longer than the calyx, the upper lip hollow, entire, and villous above, the lower lip divided into three segments, of which the side-ones are entire and bend downward, the middle one upright, round, and finely toothed. *fig. 2.*

STAMINA: four FILAMENTS, tapering, of a violet colour, forked at top, of which two are longer than the others; ANTHERÆ composed of two lobes, which diverge and sit on the inner fork. *fig. 3.*

PISTILLUM: GERMEN divided into four parts, surrounded by a notched gland; STYLE filiform, the length of the stamina; STIGMA bifid and pointed. *fig. 4, 5, 6, 7.*

SEEDS four, ovate, small, obtusely angular, smooth, brown, and terminated by a white point. *fig. 8.*

In many of the natural classes of plants, the several *genera* approximate so much, that it is difficult to find out a character which shall obviously distinguish them; such a character is however afforded in the present plant. If the filaments are examined, each of them will be found forked at the extremity, and the anthera sustained on the innermost division of the fork; besides this curious and uncommon structure, the middle segment of the lower lip is finely toothed. This is noticed by *TOURNEFORT* in his figures of this genus, but the former wholly omitted. It did not however escape the penetrating *LINNÆUS*, who considers it as the essential character of the *Prunella*; nor is the calyx in this plant undeserving of our attention, whether we consider its structure, or the singular manner in which it closes up to preserve the seeds.

The *Self-heal* has an herbaceous roughish taste, and hence stands recommended in alvine fluxes; it has been principally celebrated as a vulnerary, whence its name, and in gargarisms for apthæ, and inflammations of the fauces. *Lewis's Disp. p. 205.*

It grows very commonly in meadows and pastures, and flowers in June and July. Its blossoms, which are usually of a violet colour, are sometimes found white, and sometimes red.

According to *LINNÆUS*'s experiments, kine, goats, and sheep, eat it; but horses refuse it.

SCUTELLARIA MINOR. SMALL HOODED-WILLOW HERB.

SCUTELLARIA *Lin. Gen. Pl.* DIDYNAMIA GYMNOSPERMIA.

Calyx ore integro: post florescentiam clauso, operculato.

Raii Syn. Gen. 14. SUFFRUTICES ET HERBÆ VERTICILLATÆ.

SCUTELLARIA *minor* foliis cordato-ovatis subintegerrimis, floribus axillaribus. *Lin. Syst. Veg.* p. 457. *Sp. Plant.* p. 835.

CASSIDA palustris minima flore purpurascens. *Tourn. Hist.* p. 410.

LYSIMACHIA galericulata minor. *Raii Hist.* 572. *Syn.* 244. The lesser-hooded Loofeftrife.

GRATIOLA latifolia. *Gerard emac.* 585.

GRATIOLA latifolia seu nostras minor. *Parkinsf.* 221. *Hudson Fl. Angl. ed. 2.* p. 265. *Lightfoot Fl. Scot.* p. 320.

RADIX perennis, repens, alba.

CAULIS erectus, palmaris, sesquipalmaris, et ultra, simplex, aut ramosus, in horto ramosissimus evadens, tetragonus, rigidulus, subhirsutus, basi purpurascens.

FOLIA opposita, subsecunda, brevissime petiolata, cordato-ovata, obtusa, subintegerrima, in umbrosis glabra, in apricis hirsuta, et subinde rubentia.

FLORES parvi, carnei, axillares, bini, pedunculati, pedunculis calyce longioribus.

CALYX: PERIANTHIUM monophyllum, brevissimum, hirsutum, ore bilabiato, integro, squamula incumbente operculi instar clausili, *fig. 1.*

COROLLA monopetala, ringens, labium superius trifidum, superne villosum, laciniis subæqualibus, intermedia concavâ emarginatâ, lateralibus remotiusculis, nec intermediæ subjectis sicut in galericulata, *fig. 2.* inferius latius, emarginatum, punctis et lineolis rubris pulchre variegatum, *fig. 3.*

STAMINA: FILAMENTA quatuor, alba, sub labio superiore recondita, quorum duo longiora. ANTHERÆ minimæ, albæ, ad lentem hirsutæ, *fig. 4.*

PISTILLUM: GERMEN quadripartitum. STYLUS albus, longitudine flaminum, superne paululum incrassatus. STIGMA simplex, incurvatum, acuminatum, *fig. 5.*

PERICARPIUM nullum, calyx continens

SEMINA quatuor, subrotunda, ad lentem aspera, *fig. 6.*

NECTARIUM glandula aurantiaca ad basin germenis, *fig. 7.*

ROOT perennial, creeping, and white.

STALK upright, a hand's breadth, six inches or more in height, simple or branched, in the garden becoming very much so, four-cornered, somewhat rigid and hirsute, purplish at the base.

LEAVES opposite, with a tendency to grow one way, standing on very short foot-stalks, heart-shaped, ovate, obtuse, almost entire on the edges, in shady situations smooth, in exposed ones hirsute, and sometimes reddish.

FLOWERS small, of a pale red colour, growing by pairs in the axæ of the leaves, standing on foot-stalks longer than the calyx.

CALYX: a PERIANTHIUM of one leaf, very short, hirsute, the mouth composed of two lips and entire, with a small scale like a lid resting on it, *fig. 1.*

COROLLA monopetalous, and ringent, the upper lip trifid, and villous above, the segments nearly equal, the intermediate one hollow and nicked, the side ones somewhat distant from each other, not placed under the intermediate one as in the galericulata, *fig. 2.* the lower lip broader, with a single notch, and prettily variegated with red lines and dots, *fig. 3.*

STAMINA: four FILAMENTS, of a white colour, hid under the upper lip, two of which are longer than the other two. ANTHERÆ very minute, white, and slightly hirsute, when magnified, *fig. 4.*

PISTILLUM: GERMEN divided into four parts. STYLE white, the length of the stamina, thickened a little above. STIGMA simple, a little hooked, and pointed, *fig. 5.*

SEED-VESSEL none, the calyx containing four seeds.

SEEDS of a roundish shape, appearing rough when magnified, *fig. 6.*

NECTARY: an orange-coloured gland at the base of the germen, *fig. 7.*

GERARD, our countryman, appears to have been the discoverer of this species, to which he gives the names of *Gratiola latifolia*. PARKINSON, who considered it as a plant peculiar to this country, adds to them the epithet of *nostras*. TOURNEFORT, afterwards enumerating the plants growing about *Paris*, mentions it as growing with them in several places; nevertheless it is not common throughout Europe. Indeed LINNÆUS, in his *Species Plantarum*, expressly says, *habitat in Anglia*. GERARD's referring a plant to another genus, so obviously similar in its parts of fructification to what was then called *Lysimachia galericulata*, shews, that little attention was paid to those parts at that time; nor was he very fortunate in applying to the leaves of so small a plant the name of *latifolia*.

Had LINNÆUS frequently seen and cultivated this plant, as we have had opportunity of doing, he would have expressed no doubt of its being too nearly related to the *galericulata* and *hastifolia*. Vid. *Spec. Plant.*

In the time of old GERARD, this species was found on *Hampstead-Heath*, and on some of the boggy parts of that Heath it still exists; but is more plentifully met with in similar situations, on *Putney* and *Shirley Commons*.

It flowers in July, August, and September. On *Shirley-Common* we have seen it much larger than the specimen figured; and this summer found a single plant which had blue flowers.

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*Scutellaria minor.*



Orobanche

major.

OROBANCHE MAJOR. COMMON BROOM-RAPE.

OROBANCHE *Lin. Gen. Pl. Didynamia Angiospermia.*

Cal. bifidus. Cor. ringens. Caps. unilocularis, bivalvis, polysperma; Glandula sub basi germinis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

OROBANCHE *major* caule simplicissimo pubescente, flaminibus subexsertis. *Lin. Syst. Vegetab. p. 497: Spec. Pl. p. 882. Fl. Succ. n. 561.*

OROBANCHE caule simplici; stipula unica, calyce quadrifido. *Haller: Hist. 295:*

OROBANCHE *major: Scopoli Fl. Carn. n. 782.*

OROBANCHE *major* Garyophyllum olens. *Bauh. pin. 87.*

RAPUM Genistæ *Ger. emac. 1311. Parkins. 229. Raii Syn. p. *288. Broom-rape. Hudson. Fl. Angl. ed. 2. p. 266. Lightfoot Flor. Scot. p. 332.*

RADIX Spartii scoparii radicibus plerumque adnascitur.	ROOT generally grows to the roots of the common Broom.
CAULIS pedalis ad sesquipedalem, erectus, simplex, fistulosus, teretiusculus, sulcato-striatus, villosus, purpurascens, squamis sparsis, marcidis, tectus, ad basin bulbosus, bulbo squamoso.	STALK from a foot to a foot and a half in height, upright, simple, hollow, roundish; somewhat channeled, villous, of a purplish colour, covered with withered squamæ, bulbous at bottom, the bulb squamous.
FLORES spicati, sessiles, purpurascens plerumque, aliquando etiam flavescentes, spica primo acuta, dein subcylindrica.	FLOWERS growing in spikes, sessile, for the most part purplish, sometimes also yellowish, the spike is at first pointed, and then becomes cylindrical.
CALYX: PERIANTHIUM monophyllum, erectum, quadrifidum, postice ad basin usque divisum, et antice magis profunde quam ad latera, villosum, albescens, laciniis seu dentibus subæqualibus, ferrugineis. <i>fig. 1.</i>	CALYX: a PERIANTHIUM of one leaf, upright, divided into four segments, posteriorly quite down to the base, and anteriorly more deeply than at the sides; villous, whitish, the segments or teeth nearly equal, and ferruginous. <i>fig. 1.</i>
COROLLA: monopetala, ringens, plerumque purpurascens, ad ferrugineum colorem accedens, persistens; <i>tubus</i> inclinatus, amplus, ventricosus; <i>faux</i> hians; <i>labium superius</i> concavum, obsolete trifidum, subcarinatum, externe viscidum; <i>labium inferius</i> trifidum, lacinulâ mediâ productiore, concava. <i>fig. 2.</i>	COROLLA monopetalous, ringent, generally purplish, approaching to the colour of rusty iron; <i>tube</i> bending downward, large, bellying out; <i>mouth</i> gaping; <i>upper-lip</i> hollow, obsoletely trifid, somewhat keeled, and externally viscid; the lower lip trifid and hollow, the middle segment the longest. <i>fig. 2.</i>
STAMINA: FILAMENTA quatuor, subulata, alba, sub labio superiore recondita, quorum duo longiora; ANTHERÆ leviter cohærentes, stramineæ, didymæ, ovatæ, mucronibus terminatæ. <i>fig. 3.</i>	STAMINA: four FILAMENTS, tapering, white, hid under the upper lip, two of which are longer than the rest; ANTHERÆ slightly cohering, of a straw colour, double, ovate, each cavity terminating in a point. <i>fig. 3.</i>
PISTILLUM: GERMEN oblongum, basi antice tribus glandulis, protuberantibus, flavis, melleum liquorem copiose fundentibus, notatum; STYLUS pubescens, flaminibus paulo longior, purpurascens, apice inflexus; STIGMA semibifidum, obtusum, crassiusculum, flavum. <i>fig. 4.</i>	PISTILLUM: GERMEN oblong, marked anteriorly at the base with three protuberant yellow glands, which pour forth plentifully a sweet liquor; STYLE downy, a little longer than the stigma, purplish, bent down at top; STIGMA half-divided, obtuse, thickish, and yellow. <i>fig. 4.</i>
PERICARPIUM: CAPSULA ovato-oblonga, acuminata, unilocularis, bivalvis. <i>fig. 5.</i>	SEED-VESSEL an ovate, oblong capsule, terminating in a point, of one cavity and two valves. <i>fig. 5.</i>
SEMINA numerosa, minima; receptacula quatuor, linearia, lateralia, adnata. <i>fig. 6, 7.</i>	SEEDS numerous and very small; receptacles four, linear, growing to the sides of the capsule. <i>fig. 6, 7.</i>

The literal English translation of the Greek word *Orobanche* is *Strangle-tare**: this term has been given by Dioscorides to one plant, and by Theophrastus to another; ours is undoubtedly the *Orobanche* of Dioscorides, (as it accords with his description †), and also of Pliny. The *Orobanche* of Theophrastus must have been some

* ΟΡΟΒΑΓΧΗ, *Ervangina Gazæ*, quod ὀρεβον ἀγχεῖ, *ervum strangulet*, dicitur.

† “*Orobanche cauliculus est sesquipedalis, et interdum major, subruber, hirsutus, tener, sine foliis, pinguis: flore subalbido, aut in luteum vergente: radice digiti crassitudine, et cum ariditate flaccescit caulis, fistulosus. Hanc inter quædam legumina nasci constat, et ea strangulare, unde Orobanche sibi cognomentum usurpavit. Estur, ut olus, cruda, et in patinis, asparagi modo, decocta. Legumentis addita, concoctio nem accelerare creditur.*” *Matth. ex Diosc.*

climbing

climbing plant, as is evident from his words, which are thus quoted by MATTHIOLUS, “*Erbum necat amplexu complexuque suo*,” whereas the *Orobanche* of DIOSCORIDES, according to the same author, by its presence only, “*suâ tantum presentia*,” destroys the Legumina, Corn, Hemp, and Flax which grow near it, and from which property of choaking and devouring the neighbouring plants, MATTHIOLUS says they called it in some parts of Italy the *Wolf plant*; its pernicious effects in this respect are confirmed by a later Italian writer MICHELI, who mentions its being proscribed in Tuscany by public edict.

The most remarkable circumstance in the œconomy of this plant, is its growing from the roots of others; CASPAR BAUHINE asserts, that it is always attached to the fibres (*fibris*) of some plant near it; several of my botanic friends are of opinion that it is not parasitical in all situations, especially in corn-fields, but they have not confirmed their opinions by actual and repeated examinations, which are still wanting. The plants from the roots of which CASP. BAUHINE observed it to grow were the *Spartium Scoparium*, common Broom, *Genista tinctoria*, Woodwaxen, *Hieracium subaudum*, shrubby Hawkweed, *Trifolium*, Trefoil, (no particular species is mentioned), and *Orobis tuberosus*, Wood Pea; all of these (one excepted) are leguminous plants, to which it is observed to have the strongest attachment; I have met with it but rarely about London, excepting one spot, in which it might be said truly to abound; this was a small, hilly, barren field, covered partly with furze and broom, on the left-hand side of the road, within about two miles of Kingston, Surry, about half a mile beyond the Robin Hood and Turnpike, in which field the Botanist will find several other rare plants. I have also seen it on Hampstead Heath, and on the borders of Charlton Wood; in these several situations it grew either out of the roots of Broom or Furze, but chiefly the former. My late gardener ROBERT SQUIBB once brought me out of Surry a very strong plant of *Orobanche*, which had grown in a corn field on the root of the *Centaurea Scabiosa*: I planted both roots in my garden, in the situation they were found; the *Knapweed* grew, but the *Broom-rape* died. Several persons have informed me of their having found it to be parasitical on the roots of *Clover*, in particular Dr. GOODENOUGH and Mr. RUGGLES of Cobham; Mr. THOMAS WHITE once related to me his having observed a small *Orobanche* growing on walls, &c. in Pembrokeshire, and that the decayed floor of an old castle in particular was almost covered with it; he also noticed, that in some of the western counties this plant was so common as to give the mowers cause of complaint.

The *Orobanche* appears to vary in size according to the size of the root it grows on, the stem being sometimes almost as thick as one's thumb, and at other times not much larger than a wheat-straw; the flowers vary much in their colour, but are mostly dead-purple or yellowish.

The seed of this plant is remarkably small, hence it will be extremely difficult to shew its vegetation by experiment, more especially as it requires a very particular soil and situation, yet no one can doubt but the plant is propagated thereby; it must first vegetate on the earth, then the radicle, which is sent downward, finding a proper root, attaches itself to it, quits its parent earth, and becomes parasitical.

It has a faint smell of cloves, and is said to be a strong astringent and useful vulnerary.

LINNÆUS remarks that *Sweden* is too cold for it to flourish with them.

*Antirrhinum**Orlantum.*

ANTIRRHINUM ORONTIUM. SMALL SNAPDRAGON.

ANTIRRHINUM *Lin. Gen. Pl.* DIDYNAMIA ANGIOSPERMIA.

Cal. 5-phyllus. *Corollæ* basis deorsum prominens, nectarifera.
Capsula 2-locularis.

Raii Syn. Gen. 18. HERBÆ FRUCTU SICCO SINGULARI FLORE MONOPETALO.

ANTIRRHINUM *Orontium* corollis ecaudatis, floribus subspicatis, calycibus corolla longioribus. *Lin. Syst. Vegetab.* p. 466. *Sp. Pl.* p. 860. *Fl. Suec.* n. 559.

ANTIRRHINUM foliis ellipticis obtusis, floribus sparsis, calycibus subulatis longissimis, calcare brevissima. *Haller. Hist.* n. 334.

ANTIRRHINUM *Orontium.* *Scopoli Fl. Carn.* n. 774.

ANTIRRHINUM angustifolium sylvestre. *Baub. Hist.* III. 464.

ANTIRRHINUM arvense majus. *Baub. pin.* 212.

ANTIRRHINUM sylvestre medium. *Parkin. 1334.* *Raii Syn.* p. *283. The lesser wild Calf's Snout or Snapdragon. *Hudson. Fl. Angl. ed. 2.* p. 274.

RADIX annua, simplex, rigida, albida, fibrosa, fibris paucis, patentibus.	ROOT annual, simple, stiff, whitish, fibrous, fibres few and spreading.
CAULIS spithamæus, aut pedalis, simplex seu ramosus, erectus, teres, pilosus, pilis patentibus, subviscidis.	STALK from a span to a foot in height, simple or branched, upright, round, hairy, the hairs spreading and somewhat viscid.
FOLIA ima opposita, subconnata, superiora alterna, lineari-lanceolata, carinata, deflexa, integerrima, hirsutula.	LEAVES of a shape betwixt linear and lanceolate, keeled, turning downward, entire at the edge, slightly hairy, the lowermost opposite, slightly uniting at the base, the uppermost alternate.
FLORES pauci, axillares, sessiles, rubelli, vix spicati, nisi in speciminibus majoribus.	FLOWERS few, growing from the axæ of the leaves, sessile, of a bright red colour, scarcely forming a spike, unless in large specimens.
CALYX: PERIANTHIUM quinque-partitum, persistens, laciniis linearibus, carinatis, hirsutis, longitudine corollæ, superiore longiore.	CALYX: a PERIANTHIUM deeply divided into five segments, and permanent; the segments linear, keeled, hairy, the length of the corolla, the uppermost segment longest.
COROLLA monopetala, rosea, venis saturationibus striata, inferne et superne pubescens; labium superius bifidum, lateribus reflexum, inferius trifidum, laciniis deflexis, intermedia minore, Nectarium brevissimum, obtusum. <i>fig. 1.</i>	COROLLA monopetalous, rose coloured, striped with veins of the same colour but deeper, both above and below slightly hairy, the upper lip bifid, the sides turning back, the lower lip trifid, the segments turning down, the middle one the smallest; Nectary very short and blunt. <i>fig. 1.</i>
STAMINA: FILAMENTA quatuor, filiformia, purpurascencia, glabra, quorum duo breviora; ANTHERÆ flavæ, bilobæ, conniventes. <i>fig. 2.</i>	STAMINA: four FILAMENTS, thread-shaped, purplish, smooth, two of which are shorter than the others; ANTHERÆ yellow, closing together, composed of two lobes. <i>fig. 2.</i>
PISTILLUM: GERMEN subrotundum, villosum; STYLUS subulatus, villosus, apice paululum inclinatus; STIGMA obtusum, flavum. <i>fig. 3.</i>	PISTILLUM: GERMEN roundish, and villous; STYLE tapering, villous, bending a little downward at top; STIGMA blunt and yellow. <i>fig. 3.</i>
PERICARPIUM: CAPSULA pedunculata, erecta, hirsuta, apice triforaminosa, bilocularis. <i>fig. 4.</i>	SEED-VESSEL: a CAPSULE standing on a footstalk, upright, hairy, having two cavities and three apertures at top. <i>fig. 4.</i>
SEMINA plurima, nigricantia, angulata. <i>fig. 5.</i>	SEEDS numerous, blackish and angular. <i>fig. 5.</i>

This species of *Antirrhinum* is distinguished from all the others, the *majus* excepted, by having no spur to the corolla, and from the *majus* by being an annual, and having long, pointed leaves to the calyx, which in that plant are short and obtuse.

It grows in tolerable plenty in Battersea Corn-fields, where it flowers in July and August.

The seed-vessel, when fully ripe, is a curious representation of the skull of a Quadruped.



Raphanus (Raphanistrum).

RAPHANUS RAPHANISTRUM. WILD RADISH.

RAPHANUS *Lin. Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Cal. clausus. Siliqua torosa, subarticulata, teres. Glandulæ melliferæ 2 inter stamina breviora et pistillum, totidem inter stamina longiora et calycem.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

RAPHANUS *Raphanistrum* filiquis teretibus articulatis lævibus unilocularibus. *Lin. Syst. Vegetab. p. 504. Sp. Pl. 935. Fl. Suec. n. 612. Haller Hist. n. 468.*

RAPHANISTRUM fegetum, flore luteo vel pallido. *Tournef. Inst. 240.*

RAPISTRUM flore luteo, filiqua glabra articulata. *Raii Syn. p. 296.*

RAPHANUS sylvestris. *Ger. emac. 240. Hudson Fl. Angl. p. 289. Lightfoot Fl. Scot. p. 362.*

RADIX annua, simplex, fibrosa, pallide fusca.	ROOT annual, simple, fibrous, and of a pale brown colour.
CAULIS pedalis ad sesquipedalem, erectus, teres, solidus, hispidus, glaucus, ad basin usque plerumque ramosus, ramis sæpe longitudine caulis, ad basin purpureis.	STALK from a foot to a foot and a half in height, upright, round, solid, hispid, glaucous, generally branched quite down to the bottom, branches often as long as the stalk, and purple at bottom.
FOLIA petiolata, pinnatifida, alterna, scabra, inferioribus pinnarum quatuor aut quinque parium, superioribus duarum triumve, omnibus obtusiuscule ferratis seu dentatis, dentibus apice purpureis.	LEAVES standing on foot-stalks, pinnatifid, alternate, rough, the lowermost consisting of four or five pair of pinnæ, the uppermost of two or three, all of them obtusely ferrated or toothed, the teeth purple at the tips.
FLORES pedunculati, lutei, albi, seu carnei, venis nigricantibus picti.	FLOWERS standing on foot-stalks, yellow, white or flesh-coloured, painted with blackish veins.
CALYX: PERIANTHIUM tetraphyllum, erectum, hispidulum, foliolis oblongis, parallelis, conniventibus, deciduis, basi gibbis, <i>fig. 1.</i>	CALYX: a PERIANTHIUM of four leaves, upright, a little hispid, the leaves oblong, parallel, closing together, deciduous, gibbous at the base, <i>fig. 1.</i>
COROLLA tetrapetala, cruciformis: petala alba five lutea vel purpurascens, venosa: venis nigricantibus, obcordata, integra, patentia, sensim in unguis calyce paulo longiores attenuata, <i>fig. 2.</i>	COROLLA composed of four petals, which are white, yellow, or purplish, veined (the veins blackish) inversely heart-shaped, entire, spreading, terminating gradually in claws, a little longer than the calyx, <i>fig. 2.</i>
STAMINA: FILAMENTA sex, subulata, erecta; quorum duo opposita longitudine calycis, quatuor vero unguibus longiora. ANTHERÆ oblongæ, erectæ, sagittatæ, <i>fig. 3.</i>	STAMINA: six FILAMENTS, tapering, upright; of which two opposite ones are of the length of the calyx, and four of the length of the claws of the corolla. ANTHERÆ oblong, upright, arrow-shaped, <i>fig. 3.</i>
PISTILLUM: GERMEN oblongum, ventricosum, attenuatum, longitudine flaminum. STYLUS vix ullus. STIGMA capitatum, integrum, <i>fig. 4.</i>	PISTILLUM: GERMEN oblong, bellying out a little, tapering, the length of the stamina. STYLE scarce any. STIGMA forming a little head, and entire, <i>fig. 4.</i>
PERICARPIUM: Siliqua teres, articulata, articulis tribus ad sex et ultra, sulcatis, unilocularibus, monospermis, geniculis attenuatis, apice rostrata, rostro lineari compresso, glabra, <i>fig. 5.</i>	SEED-VESSEL a round jointed <i>Pod</i> , composed of three, six, or more joints, which are grooved, of one cavity, containing a single seed, the joints cut in, the apex terminating in a linear, flat, smooth beak, <i>fig. 5.</i>
SEMINA subrotunda, ferruginea, glaberrima, magnitudine feminum Raphani sativi, <i>fig. 6.</i>	SEEDS roundish, ferrugineous, very smooth, the size of the common garden Radish, <i>fig. 6.</i>

The present plant, in the colour of its blossom, is one of the most variable we are acquainted with, being found with white, pale-red, and yellow flowers; as the yellow is the most predominant with us, we have figured that variety.

Though the blossoms vary so widely as to colour, they are all in general striped with purplish veins; a character which contributes with several others to distinguish it from the *Sinapis Arvensis*, or *Charlock*, to which it bears no small resemblance; some of the most striking differences between these two plants we shall here enumerate.

The Charlock usually grows one-third taller than the Radish. The stalks, which in the Charlock are finely grooved, hirsute, and commonly of a deep red colour, in the Radish are smooth, yet hispid, and usually glaucous. The Charlock has often an unbranched stem; the Radish is more frequently branched quite down to the bottom; besides, the calyx is upright and close in the Radish; in the Charlock it is spreading. The flowers of the Charlock also are smaller, and always yellow.

It is a common and noxious inhabitant of Corn-fields, and flowers in *July* and *August*.

LINNÆUS has given a particular paper on this plant in the *Amœnitates Academicæ*, in which he endeavours to prove, that an epidemic spasmodic disease, common in some parts of *Sweden*, is owing to the seeds of this plant being ground with the corn and eaten by the inhabitants.



Turritis glabra.

TURRITIS GLABRA. SMOOTH TOWER-MUSTARD.

TURRITIS *Lin. Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Siliqua longissima, angulata. *Cal.* connivens, erectus. *Cor.* erecta.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ, SILIQUOSÆ ET SILICULOSÆ.

TURRITIS *glabra* foliis radicalibus dentatis hispidis, caulinis integerrimis amplexicaulibus glabris.
Lin. Syst. Vegetab. p. 502. *Sp. Pl.* p. 930. *Haller. Hist.* n. 455.

TURRITIS *glabra.* *Scopoli Fl. Carn.* n. 839.

BRASSICA fylvestris foliis circa radicem cichoraceis. *Baub. Pin.* 112.

TURRITIS foliis inferioribus cichoraceis, cæteris perfoliatis. *J. R. H.*

BRASSICA fylvestris ramosa tota penè glabra. *Baub. Pin.* 112.

TURRITIS vulgatior. *Baub. Hist.* II. 836.

TURRITIS *Ger. emac.* 272. *Parkins* 852. *Raii Syn.* p. 293. Tower-Mustard. *Hudson Fl. Angl.* ed. 2. p. 291.

RADIX biennis, simplex, alba, sublignosa, alte in terram, descendens, paucis fibrillis capillata.

CAULIS pedalis ad tripedalem, erectus, plerumque simplex, firmus, teres, solidus, prope terram hirsutus, supernè glaber.

FOLIA radicalia pallide viridia, hirsuta, ad margines sinuata, tres quatuorve uncias longa, caulina glauca, glabra, integerrima, amplexicaulia, erecta, sagittata.

FLORES in fummis caulibus parvi, ex albo lutescentes.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovato-oblongis, erectis, deciduis. *fig. 1.*

COROLLA: tetrapetala, cruciformis. *Petala* ovato-oblonga, obtusa, integra, unguibus erectis. *fig. 2.*

STAMINA: FILAMENTA sex, subulata, alba, quorum duo breviora. ANTHERÆ simplices, flavæ. *fig. 3.*

PISTILLUM: GERMEN longitudine floris, teres, subcompressum. STYLUS nullus. STIGMA obtusum. *fig. 4.*

PERICARPIUM: *Siliquæ* plurimæ, pedicellatæ, erectæ, duos vel tres digitos longæ, caulem fere occultantes, teretiunculæ, subcompressæ, obsolete quadrangulæ. *fig. 5.*

SEMINA parva, numerosissima, ovata, planiuscula, rufa. *fig. 6.*

ROOT biennial, simple, white, somewhat woody, penetrating deeply into the earth, furnished with few fibres.

STALK from one to three feet in height, upright, generally simple, firm, round, solid, near the ground hirsute, above smooth.

LEAVES next the root, of a pale green colour, strongly hairy, jagged on each side, three or four inches in length, those of the stalk glaucous, perfectly smooth and entire, embracing the stalk, upright, and arrow-shaped.

FLOWERS on the top of the stalks, small, of a whitish yellow colour.

CALYX: a PERIANTHIUM of four leaves, the leaves of an ovate oblong shape, upright and deciduous. *fig. 1.*

COROLLA tetrapetalous and cross-shaped. *Petals* of an ovate-oblong shape, obtuse, entire, claws upright. *fig. 2.*

STAMINA: six FILAMENTS, tapering, white, two of which are shorter than the others. ANTHERÆ simple, and yellow. *fig. 3.*

PISTILLUM: GERMEN the length of the flower, round, a little flattened. STYLE none. STIGMA blunt. *fig. 4.*

SEED-VESSEL: *Pods* numerous, standing on foot-stalks, upright, two or three fingers breadth in length, almost hiding the stalk, roundish, somewhat flattened, faintly quadrangular. *fig. 5.*

SEEDS small, very numerous, ovate, flattish, of a reddish brown colour. *fig. 6.*

The term *glabra* is only proper when applied to the upper part of this plant, the radical leaves, which generally decay as the plant approaches to maturity, being hairy, like many other plants of the same family.

It is found but rarely near *London*. Hitherto I have only noticed it in one spot, *viz.* in the lane which leads down by *Charlton Church*, and there but sparingly; further on in *Kent* it is much more common, as well as in many other parts of *England*. It usually grows on banks near hedges, and flowers in *June* and *July*.

It varies so much in size, that the old Botanists make two species of it.

CARDAMINE HIRSUTA. HAIRY LADIES-SMOCK.

CARDAMINE *Lin. Gen. Pl.* TETRADYNAMIA SILIQUOSA.

Siliqua elastice diffiliens valvulis revolutis. *Stigma* integrum. *Cal.* subhians.

Raii Syn. Gen. 21. HERBÆ TETRAPETALÆ SILIQUOSÆ ET SILICULOSÆ.

CARDAMINE foliis pinnatis, floribus tetrandris. *Lin. Syst. Vegetab.* p. 497. *Sp. Pl.* p. 915. *Fl. Suec.* n. 587.

CARDAMINE foliis pinnatis hirsutis, pinnis subrotundis, staminibus quaternis. *Haller Hist.* 472.

CARDAMINE *hirsuta.* *Scopoli Fl. Carn.* n. 817. t. 38.

NASTURTIIUM aquaticum minus. *Bauh. Pin.* 104.

CARDAMINE impatiens altera hirsutior. *Raii Syn.* p. 300. The lesser Hairy, impatient Cuckow-Flower or Ladies-Smock.

CARDAMINE foliis pinnatis, foliolis radicalibus subrotundo-cordatis; caulinis ovatis dentatis petiolatis. *Hudson. Fl. Ang. ed. 2.* p. 295. *Lightfoot Fl. Scot.* p. 348.

RADIX annua, fibrosa, fibris albidis.

CAULIS spithamæus, et ultra pro ratione loci, in fossis humidis reperitur etiam sesquipedalis, solidus, erectus, flexuosus, sulcato-angulosus, prope basin purpureus, et sæpius hirsutissimus, superne fere glaber, ramosus, ramosissimus etiam occurrit.

FOLIA radicalia plurima, in orbem posita, pinnata, foliolis petiolatis, rotundato angulatis, plerumque quinque lobatis, hirsutis, punctis prominulis scabriusculis, lobis inæqualibus, nunc obtusis, nunc acutis, caulina angustiora et magis profunde incisa, lobis paucioribus.

FLORES parvi, albi, primo vere tantum, tetrandri.

CALYX: PERIANTHIUM tetraphyllum, foliolis ovato-oblongis, obtusis, concavis, deciduis, pilis paucis albidis instructis, *fig. 1.*

COROLLA: PETALA quatuor, alba, calyce duplo fere longiora, patentia, integerrima, obtusa, *fig. 2.*

STAMINA: FILAMENTA plerumque sex, quorum duo, breviora, alba. ANTHERÆ minimæ, lutescentes, *fig. 3.*

PISTILLUM: GERMEN oblongum, tenue, staminibus paulo brevior. STIGMA capitatum, *fig. 4.*

PERICARPIUM: *Siliqua* erecta, uncialis, subcompressa, bivalvis, elastice diffiliens, valvulis revolutis, *fig. 5.*

SEMINA duodecim circiter, suborbiculata, compressa, glabra, e flavo fusca, *fig. 6.*

ROOT annual and fibrous, the fibres whitish.

STALK about a span high, or more, according to the situation in which it grows; in wet ditches it is sometimes found even a foot and a half in height, solid, upright, crooked, grooved or angular, purple near the base, and most commonly very hairy, above nearly smooth, branched, sometimes very much so.

LEAVES next the root numerous, forming a circle, pinnated, the small leaves standing on foot-stalks, round yet angular, generally divided into five lobes, hirsute, roughish with little prominent points, the lobes unequal, sometimes blunt and sometimes pointed; those of the stalk narrower, and more deeply indented, with fewer lobes.

FLOWERS small, and white, early in the spring having only four stamina.

CALYX: a PERIANTHIUM of four leaves, of an ovate, oblong shape, obtuse, hollow, deciduous, furnished with a few white hairs, *fig. 1.*

COROLLA: four white PETALS, almost twice the length of the calyx, spreading, entire and obtuse, *fig. 2.*

STAMINA: for the most part six FILAMENTS, of which two are shorter than the rest, of a white colour. ANTHERÆ very small and yellowish, *fig. 3.*

PISTILLUM: GERMEN oblong, slender, a little shorter than the stamina. STIGMA forming a small head, *fig. 4.*

SEED-VESSEL: an upright *Pod*, about an inch in length, somewhat flattened, of two valves, which burst with an elastic force, and roll back, *fig. 5.*

SEEDS about twelve in number, nearly round and flattened, smooth, and of a yellowish-brown colour, *fig. 6.*

We were inclined to believe with our ingenious friend Mr. LIGHTFOOT, that the *Cardamine hirsuta* and *parviflora* were distinct species; but repeated observation and culture have convinced us, that they are both the same, varying only in size, in hairiness, and in the number of their stamina.

In wet situations, where the soil is luxuriant, it grows a foot or two in height, and loses in a great degree its hairiness; in exposed places it seldom reaches more than six or eight inches, and is generally much more hairy; and, when it grows singly, much more branched. The same plant, early in the spring, when the weather is cold, has only four stamina; as the summer advances, it has constantly six. The lobes of the radical leaves vary much in shape, and are frequently much rounder than the figure represents.

This species is by no means general about London, but abounds in particular places; as by *Chelsea* water-works, in wet ditches about *Hampstead*, *Highgate*, and elsewhere.

It flowers in *April* and *May*. In the garden, if the situation in which it is sown be shady, and the season not uncommonly dry, it continues flowering and seeding during the whole of the summer.

According to Mr. LIGHTFOOT, the young leaves are a good ingredient in a salad, and may easily be obtained in the spring, when Mustard and Cress are not to be had.



Cardamine hirsuta.

GERANIUM PRATENSE. CROWFOOT CRANESBILL.

GERANIUM *Lin. Gen. Pl.* MONADELPHIA DECANDRIA.

Monogyna. *Stigmat.* 5. *Fructus* rostratus, 5-coccus.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

GERANIUM *pratense* pedunculis bifloris, foliis subpeltatis multipartitis rugosis acutis, petalis integris. *Lin. Syst. Veget.* p. 514. *Sp. Pl.* p. 954. *Fl. Suec.* n. 968.

GERANIUM caule erecto, foliis rugosis hirsutis multilobis, lobis trifidis, lobulis semipinnatis, floribus umbellatis. *Haller. Hist.* n. 931.

GERANIUM *pratense* *Scopoli Fl. Carn.* n. 852.

GERANIUM batrachoides, Gratia Dei Germanorum. *Baub. Pin.* 318.

GERANIUM Batrachoides. *Ger. emac.* 922.

GERANIUM Batrachoides flore cæruleo. *Park.* 704. *Raii Syn. ed.* 3. p. 360. Crowfoot Cranesbill. *Hudson Fl. Angl. ed.* 2. p. 302. *Lightfoot Fl. Scot.* p. 368.

RADIX	perennis, crassitie digiti minimi aut major, horizontalis, rugosa, e rubro fusca, intus flavescens, fibris majusculis profunde penetrantibus instructa.	ROOT	perennial, the thickness of the little finger, or larger, horizontal, wrinkled, of a reddish brown colour, yellowish within, furnished with largish fibres, which penetrate to a great depth.
CAULIS	pedalis ad tripedalem, erectus, ramosus, teretiusculus, pubescens, basi ruberrimus, subangulosus.	STALK	from one to three feet in height, upright, branched, roundish, downy, very red, and somewhat angular at the bottom.
FOLIA	hirsutula, radicalia longissime petiolata, suprema subsessilia, omnibus multipartitis, venosis, subtus pallidioribus, lacinis multifidis, incisis.	LEAVES	somewhat hirsute, those next the root, standing on very long footstalks, the uppermost ones nearly sessile, all of them deeply divided into many segments, veiny and paler underneath, the segments jagged.
PETIOLI	teretes, pubescentes.	LEAF-STALKS	round and downy.
STIPULÆ	ad basin foliorum utrinque binæ, ovato acuminatæ, primo rubicundæ, dein marcescentes, ad basin pedunculorum quinæ, lanceolatæ.	STIPULÆ	at the base of the leaves two on each side, ovate and pointed, at first reddish, afterwards withering, those at the base of the peduncles five in number, and lanceolate.
PEDUNCULI	gemini, pilosissimi, viscosi, primo nudentes, demum erecti.	FLOWER-STALKS	growing two together, very hairy, clammy, at first drooping, lastly upright.
FLORES	magni, speciosi, e purpureo cærulei.	FLOWERS	large, showy, of a purplish blue colour.
CALYX:	PERIANTHIUM pentaphyllum, persistens, foliolis ovatis, acutis, concavis, margine membranaceis. <i>fig. 1.</i>	CALYX:	a PERIANTHIUM of five leaves and permanent, the leaves ovate, pointed, concave, bearded, clammy, ribbed and membranous at the edge. <i>fig. 1.</i>
COROLLA:	PETALA quinque, subintegerrima, venosa, basi utrinque hirsutula. <i>fig. 2.</i>	COROLLA:	five PETALS, nearly entire, veiny, hairy on each side the base. <i>fig. 2.</i>
STAMINA:	FILAMENTA decem subulata, superne purpurascentia, inferne lata, albida; ANTHERÆ oblongæ, cæuleæ, incumbentes. <i>fig. 3.</i>	STAMINA:	ten FILAMENTS, tapering, purplish above, below broad and whitish; ANTHERÆ oblong, blue and incumbent. <i>fig. 3.</i>
PISTILLUM:	GERMEN pentagonum, viscosum, viride; STYLUS filiformis, rubicundus, staminibus longior; STIGMA quinquesidum, laciniis linearibus, reflexis. <i>fig. 4.</i>	PISTILLUM:	GERMEN pentagonal, clammy, of a green colour; STYLE filiform, reddish, longer than the stamina; STIGMA divided into five segments, which are linear and turned back. <i>fig. 4.</i>
SEMEN	oblongum, læve, ex arillo elastice diffiliens. <i>fig. 5, 6.</i>	SEED	oblong, smooth, thrown from the seed-covering with considerable elasticity. <i>fig. 5, 6.</i>

This is by far the most showy of the Cranesbills growing wild with us, and in that respect is exceeded by none of the English ones except the *Sanguineum*. Its leaves are large, and somewhat like those of the Meadow Crow-foots, whence its name.

Its beauty has long since recommended it to the notice of the curious in flowers, in the gardens of which we find it not only as it commonly occurs, but also with white, purple, and striped blossoms.

It loves a moist situation, as it naturally grows wild in meadows, which it ornaments with its blossoms in July and August. Near London it is found in tolerable abundance in the meadows about Battersea, and in the vicinity of the *Thames* both above and below bridge; in many parts of *Yorkshire*, particularly about *Settle*, it is almost as common as the Mallow is with us, not only in meadows, but every where under their stone walls.

The blossoms are much resorted to by various species of flies, particularly those of the Genus *Empis*.

*Geranium pratense.*

MALVA MOSCHATA. MUSK MALLOW.

MALVA *Lin. Gen. Pl.* MONADELPHIA POLYANDRIA.

Cal. duplex: exterior triphyllus. *Arilli* plurimi, monospermi.

Raii Syn. Gen. 15. HERBÆ SEMINE NUDO POLYSPERMÆ.

MALVA *moschata* caule erecto, foliis radicalibus reniformibus incis; caulinis quinquepartitis pinnato-multifidis. *Lin. Syst. Vegetab.* p. 523. *Spec. Pl.* p. 971. *Fl. Succ.* n. 629.

MALVA foliis radicalibus reniformibus, incis, caulinis quinquepartitis pinnatis, pinnis dentatis. *Haller. Hist.* n. 1072.

MALVA *Moschata.* *Scopoli Fl. Carn.* n. 861.

MALVA montana five Alcea rotundifolia laciniata. *Col. Ecphr.* t. p. 148. t. 147.

ALCEA folio rotundo laciniato. *Bauh. Pin.* 316.

ALCEA tenuifolia crispa. I. B. II. *App.* 1067. *Raii Syn.* p. 253. *Hudson. Fl. Angl. ed. 2.* p. 308. *Lightfoot Fl. Scot.* p. 376.

RADIX perennis, albida, sublignosa, difficillime eruta.

CAULIS: ex una radice caules nascuntur plurimi, bipedales, suberecti, ramosi, teretes, fistulosi, hirsuti, punctis purpureis prominulis adspersi, e quibus pili prodeunt.

FOLIA alterna, petiolata, inferiora plerumque sex partita, laciniis pinnatifidis, multifido-laciniatis, hirsutulis, apice subacutis, superiora brevius petiolata, in pauciores et tenuiores lacinias divisa.

STIPULÆ utrinque binæ, erectæ, lanceolatæ, hirsutæ, marginæ undulatæ.

FLORES magni, speciosi, carnei.

PEDUNCULI unciales, teretes, pilosi.

CALYX: PERIANTHIUM duplex, inferius triphyllum, foliolis lanceolatis, superius quinquesidum, ovato-acutum, sæpe laciniatum, punctatum, hirsutum, margine serrato glandulosum. *fig. 1.*

COROLLA: PETALA quinque, subtriangularia, carnea, venis saturationibus ramosis notata, apice subtruncata, erosa, basi albida, margine utrinque ciliata. *fig. 2.*

STAMINA: FILAMENTA plurima, in tubum cylindraceum, albidum, pilosum coalita, superne libera, reflexa. ANTHERÆ primum reniformes, carneæ, dein purpureæ, demum cærulescentes. POLLEN album, globosum. *fig. 3.*

PISTILLUM: GERMINA plurima, in orbem disposita, flavescentia; STYLI plurimi, ruberrimi, filiformes, ad unum latus pilosi, polline plerumque obducti. STIGMATA simplicia. *fig. 5.*

ROOT perennial, whitish, somewhat woody, and with difficulty pulled up.

STALK: from one root arise several stalks, about two feet high, nearly upright, branched, round, hollow, hirsute, sprinkled with purple prominent points, from which the hairs issue.

LEAVES alternate, standing on foot-stalks, the lower ones generally deeply divided into six segments, which are pinnatifid and sub-divided into many others, slightly hirsute, and pointed at the tips, the upper ones standing on shorter foot-stalks, and divided into fewer and narrower segments.

STIPULÆ two on each side, upright, lanceolate, hirsute, waved on the edge.

FLOWERS large, showy, and flesh-coloured.

FLOWER-STALKS an inch in length, round and hairy.

CALYX: a double PERIANTHIUM, the lowermost composed of three lanceolate leaves, the uppermost divided into five segments, ovate and pointed, often jagged, dotted, hirsute, the edge ferrated with small glands. *fig. 1.*

COROLLA: five PETALS, somewhat triangular, flesh-coloured, marked with branched veins of a deeper colour, somewhat truncated with a piece bit out at top, at bottom whitish, with the edge fringed on each side with hairs. *fig. 2.*

STAMINA: FILAMENTS numerous, forming a whitish hairy cylindrical tube, loose at top, and bending back. ANTHERÆ at first kidney-shaped and flesh-coloured, then purple, and lastly blueish. POLLEN white and globular. *fig. 3.*

PISTILLUM: GERMINA numerous, circularly disposed, of a yellowish colour. STYLES numerous, of a bright red colour, thread-shaped, hairy on one side, and generally covered with pollen. STIGMATA simple. *fig. 5.*

The plant here figured has been, and is still, considered by most English Botanists as the *Vervain Mallow*: there is little doubt but it is the plant which RAY considered as the *Alcea vulgaris major* of C. BAUHINE, in which idea he was most probably mistaken, as it accords better with the *Alcea rotundifolia laciniata* of that author. Be this as it may, it certainly is not the *Malva Alcea* of LINNÆUS, which Mr. HUDSON makes a native of this country; and which, he says, grows wild in *Warwickshire*, *Leicestershire*, and *Nottinghamshire*.

At the same time that LINNÆUS has very properly made two distinct species of these plants, he has been rather unfortunate in the parts he has selected for their discrimination.

Taking for granted that Mr. HUDSON has good authority for what he asserts (although the counties he specifies are not particularly mentioned by RAY) it appears, that the *Moschata* is a general, the *Alcea* a local plant; the former I have found in most of the counties I have visited, and Mr. LIGHTFOOT mentions it as growing in Scotland; the latter I have never seen wild, but have occasionally observed it in some of the gardens about London; and last year, having an opportunity of cultivating it in my own, I was agreeably surprized, to find that it afforded many obvious and satisfactory distinctions, the most striking of which I shall enumerate, for the gratification of the English Botanist.

The *Malva Alcea* grew to nearly twice the height of the *Moschata*, whence it agrees with BAUHINE's name of *major*. It was in every respect a stronger plant, and harsher to the touch; the leaves of the stalk were much less jagged; the flowers in both were pretty similar, both in shape, size, and colour; but the calyces differed remarkably. In the *Moschata* the lowermost set of leaves were lanceolate, sometimes almost linear; in the *Alcea* they were ovate; added to this, the calyx of the *Alcea*, near its base, had a large protuberant annulus or ring, which was entirely wanting in the *Moschata*. These characters of the calyx alone will, it is presumed, ever be found sufficient to distinguish the two plants when in flower; besides these, the *Moschata* drawn through the hand has the peculiar property of communicating a strong smell of musk, whence its name.

From this relation those Botanists, resident in the counties above mentioned, will be better enabled to judge whether they have the true *Malva Alcea* or not.

The *Moschata* grows very plentifully in the neighbourhood of *Coomb Wood*, and flowers in *June* and *July*.

No particular virtues or uses are attributed to this species; but its beauty entitles it to a place in the garden.

Bees resort much to it.



Molva moschata.



Trifolium , *glomeratum* ,

TRIFOLIUM GLOMERATUM. ROUND-HEADED TREFOIL.

TRIFOLIUM *Lin. Gen. Pl. DIADELPHIA DECANDRIA.*

Flores subcapitati. Legumen vix calyce longius, non dehiscens, deciduum.

Raii Syn. Gen. 23. HERBÆ FLORE PAPILIONACEO SEU LEGUMINOSÆ.

TRIFOLIUM *glomeratum* capitulis sessilibus hemisphæricis rigidis, calycibus striatis patulis æqualibus. *Lin. Syst. Vegetab. p. 573. Sp. Plant. p. 1084.*

TRIFOLIUM *arvense* supinum verticillatum. *Barr. ic. 882.*

TRIFOLIUM *parvum* rectum, flore glomerato cum unguiculis. *J. B. II. 378.*

TRIFOLIUM cum glomerulis ad caulium nodos rotundis. *Raii Syn. ed. 3. p. 329. Knotted Trefoil, with round heads. Hudson. Fl. Angl. ed. 2. p. 327.*

RADIX annua, simplex, fibrosa.

CAULES plures, palmares, procumbentes, teretes, purpurascentes, glabri, ramosi, geniculati, geniculis tumidiusculis.

STIPULÆ caulinae membranaceæ, acuminatæ, ramulorum apice sæpius recurvis.

FOLIA glabra, viridia, macula alba sæpius notata, minute ferrata.

FLORES glomerati, rubelli, axillares, capitulis sessilibus, hemisphæricis.

CALYX: PERIANTHIUM quinquedentatum, persistens, læve, striis decem coloratis notatum, dentibus ovato-acuminatis, patulis. *fig. 1.*

COROLLA longitudine calycis; vexillum sursum curvatum; alæ vexillo duplo breviores, apice paululum secedentes; carina longitudine fere alarum. *fig. 2.*

PERICARPIUM: LEGUMEN membranaceum, dispersum, intra calycem. *fig. 3.*

SEMINA minima, flavescentia. *fig. 4.*

ROOT annual, simple and fibrous.

STALKS several from the same root, four or six inches in length, procumbent, round, purplish, smooth, branched and jointed; the joints a little swelled.

STIPULÆ of the stalk membranous and pointed, those of the branches often bent back at top.

LEAVES smooth, green, often marked with a white spot, the edge finely sawed.

FLOWERS clustered, of a pink colour, growing in the axæ of the leaves, the little heads sessile; and almost globular.

CALYX: a PERIANTHIUM having five teeth, permanent, smooth, marked with ten coloured streaks, the teeth broad, pointed, and spreading. *fig. 1.*

COROLLA the length of the calyx; *standard* bent upwards; *wings* about half as long as the *standard*, separating a little at their extremities; *keel* almost the length of the wings. *fig. 2.*

SEED-VESSEL: a membranous Pod, containing two seeds within the calyx. *fig. 3.*

SEEDS very minute, and yellowish. *fig. 4.*

The blossoms of this species of *Trefoil* grow in little round balls or clusters from the axæ of the leaves, and hence it has received its name of *glomeratum*.

It may be distinguished from the *striatum*, to which it bears some affinity, by being in every part smooth, in having its balls much rounder, and the teeth of the calyx spreading backward; its blossoms also are of a brighter red colour.

Not being a plant which strikes the eye much at a distance, it is probably often overlooked; with us, however, it is certainly scarce. Mr. RAY found it about *Saxmundham* in *Suffolk*; Mr. DOODY about *Blackbeath*, and near *Greenhithe*; Mr. HUDSON in the *Isle of Shepey*; Mr. ROSE about *Norwich*, and Dr. GOODENOUGH on *Hanwell Heath*. I have found it on *Blackbeath* for several years, yet not plentifully; it is fond of a gravelly situation, with some degree of moisture; hence it must be looked for in the depressed parts of the heath. The plants growing near it were the *Trifolium striatum*, *ornithopodioides*, and *Sagina procumbens*; and at no great distance *Callitriche autumnalis*, *Montia fontana*, and *Peplis Portula*.

It flowers in June.



Hypericum quadrangulum

HYPERICUM QUADRANGULUM. SQUARE-STALKED ST. JOHN'S WORT.

HYPERICUM *Lin. Gen. Pl.* POLYADELPHIA POLYANDRIA.

Cal. 5-partitus, *Petala* 5, *Filamenta* multa in 5 phalanges basi connata.
Capsula.

Raii Syn. Gen. 24. HERBÆ PENTAPETALÆ VASCULIFERÆ.

HYPERICUM *quadrangulum* floribus trigynis, caule quadrato herbacea. *Lin. Syst. Vegetab.* p. 584.
Sp. Pl. p. 1104. *Fl. Suec.* n. 670.

HYPERICUM caule quadrangulari, foliis ovatis perforatis punctatis. *Haller. Hist.* n. 1038.

HYPERICUM *quadrangulum.* *Scopoli Fl. Carn.* n. 943.

HYPERICUM vulgare minus caule quadrangulo foliis non perforatis. *Baub. pin.* 272.

HYPERICUM *Ascyron* dictum caule quadrangulo. *Baub. Hist.* 3. p. 382.

ASCYRON *Dod. pempt.* 78. *Ger. emac.* 542. *vulgare Parkinson* 575. *Raii Syn.* p. 344. St. Peter's
Wort. *Hudson. Fl. Angl. ed.* 2. p. 334. *Lightfoot Fl. Scot.* p. 416.

RADIX perennis, subrepens, fibrosa.

CAULIS pedalis ad sesquipedalem, erectus, ramosus, glaber, rubescens, quadratus, quatuor membranulis, seu alis in secundum longitudinem productis.

FOLIA opposita, sessilia, ovata, obtusa, lævia, saturate viridia, subtus pallidiora, septemnervia, per totam superficiem punctis minutis diaphanis adpersa, margine glandulis nigris subtus præfertif punctata.

RAMI cauli similes, decussatim oppositi.

FLORES lutei, parvi, in summitatibus ramulorum dense paniculati.

RAMULI paniculæ sanguinei.

PEDUNCULI brevissimi.

CALYX: PERIANTHIUM quinquepartitum, laciniis lanceolatis, patentibus, nervosis, integerrimis, nudis. *fig. 1.*

COROLLA: PETALA quinque, lutea, lineata, glandulis paucis nigris ad oras punctata. *fig. 2.*

STAMINA: FILAMENTA plurima, in fasciculos vix divisa; ANTHERÆ subrotundæ, flavæ, glandulâ nigrâ notatæ. *fig. 3.*

PISTILLUM: GERMEN obovatum; STYLI tres, patentés, subulati; STIGMATA minima, capitata. *fig. 4.*

PERICARPIUM: CAPSULA fusca, trilocularis, trivalvis. *fig. 5.*

SEMINA plurima, minima, oblonga, nitidiuscula. *fig. 6.*

ROOT perennial, somewhat creeping and fibrous.

STALK from a foot to a foot and a half in height, upright, branched, smooth, reddish, square from having four little membranes or wings which run down the stalk.

LEAVES opposite, sessile, ovate, obtuse, smooth, of a deep green colour, paler underneath, strongly marked with seven ribs, the whole surface covered with small transparent dots, and the edge, especially on the under side, dotted with black glands.

BRANCHES like the stalk, alternately opposite.

FLOWERS of a yellow colour, small, growing on the tops of the branches in close panicles.

BRANCHES of the panicle of a deep red or blood colour.

FLOWER-STALKS very short.

CALYX: a PERIANTHIUM deeply divided into five segments, which are lanceolate, spreading, rib'd, entire, and free from glands. *fig. 1.*

COROLLA: five yellow PETALS, finely grooved, dotted on the edge with a few small black glands. *fig. 2.*

STAMINA: FILAMENTS numerous, scarcely divided into bodies or bundles; ANTHERÆ roundish, yellow, marked with a black gland. *fig. 3.*

PISTILLUM: GERMEN inversely ovate; STYLES three, spreading, tapering; STIGMATA very small, forming little heads. *fig. 4.*

SEED-VESSEL: a brown CAPSULE of three cavities and three valves. *fig. 5.*

SEEDS numerous, very small, oblong, and somewhat shining. *fig. 6.*

The *Saint-John's-Worts* (at least of this country) are a genus of plants which, having strong characteristic marks, and being subject to little variation, give the Botanist no great trouble in their investigation; it is sufficient to say of this species for instance, that it has a square stalk, and it is at once distinguished from all the others.

CASPAR BAUHINE commits no small error when he describes the leaves of the *quadrangulum* as imperforate, the least attention will shew the transparent dots on the leaves to be fully as numerous, if not so large as those of the *perforatum*; the antient Botanists also absurdly enough distinguished this species from the others by the name of *Ascyron*, or *Saint-Peter's-Wort*, but as it has no pretensions to any generic distinction, we have dropped that name, as tending much to confuse: and while we are censuring the faults of others, we shall mention an error of our own; in describing the *Hypericum perforatum* we pointed out a little black gland visible betwixt the lobes of the antheræ, as characteristic of that species, we now find the same on the *quadrangulum* also.

This species grows very plentifully by the sides of rivulets, also in wet meadows. By the sides of the ditches in *Battersea Meadows* it is particularly common, and flowers in July.

It is seldom used in medicine, the *perforatum* supplying its place.



Juncus arvensis.

SONCHUS ARVENSIS. CORN SOW-THISTLE.

SONCHUS *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. Cal. imbricatus, ventricosus. Pappus pilosus.

Raii Syn Gen. 5. HERBÆ FLORE COMPOSITO NATURA PLENO LACTESCENTES.

SONCHUS *arvensis* pedunculis calycibusque hispidis subumbellatis, foliis runcinatis basi cordatis.
Lin. Syst. Vegetab. p. 594. Spec. Pl. 1116. Fl. Suec. n. 687.

SONCHUS foliis amplexicaulibus semipinnatis ferratis, calycibus hispidis. *Haller. Hist. 23.*

HIERACIUM arvense. *Scopoli Fl. Carniol. n. 974.*

HIERACIUM majus folio fonchi. *Bauhin. Pin. 126.*

SONCHUS repens multis Hieracium majus. *Bauh. Hist. 2. 170.*

SONCHUS arborescens. *Ger. emac. 294. Raii Syn. p. 163. Tree Sow-thistle. Hudson. Fl. Angl. ed. 2. p. 337. Lightfoot Fl. Scot. 427.*

RADIX *perennis, lactiflua, longe, lateque repens* difficulter eruta.

ROOT *perennial, milky, creeping far and wide,* with difficulty eradicated.

CAULIS bi feu tripedalis et ultra, erectus, fistulosus, lactescens, subangulatus, lævis, inferne sæpe purpureus, superne ramosus.

STALK from two to three feet high, or more, upright, hollow, milky, somewhat angular, smooth, often purple below, above branched.

FOLIA alterna, runcinata, *basi cordata*, amplexicaulia, lævia, nitidula, subtus pallidiora, spinis mollicellis circa margines donata.

LEAVES alternate, like those of Dandelion, *heart-shaped at the base*, embracing the stalk, smooth, shining, paler on the under side, the edges furnished with softish prickles.

FLORES subumbellati, magni, lutei.

FLOWERS growing in a kind of umbel, *large and yellow.*

PEDUNCULI longi, teretes, *pilis longis luteis, globuligeris* vestiti.

FLOWER-STALKS long, round, covered *with long yellow hairs, bearing globules at their extremity.*

CALYX communis priusquam flosculi expanduntur cylindricus, apice truncatus, postea ventricosus, squamis plurimis, erectis, inæqualibus, carinatis, fordide viridibus, *hirsutissimis*, pilis sicut in pedunculis.

CALYX common to all the florets, before their expansion, cylindrical and cut off at the extremity, afterwards bellying at the base and conical, the scales numerous, upright, unequal, keeled, of a dirty green colour, and extremely hairy, the hairs similar to those on the footstalks.

COROLLA composita, imbricata, *Corollulis* hermaphroditis, numerosis, æqualibus.

COROLLA compound and imbricated, the Florets hermaphrodite, numerous and equal.

Propria monopetala, *tubus* albus, tenuis, superne pilosus, limbus luteus, longitudine fere tubi marginibus sæpe subinvolutis, quinquedentatus, *fig. 1.*

Each Floret monopetalous, the *tube* white, slender, hairy above, the flat part yellow, almost the length of the tube, the edges frequently rolled inward, furnished with five teeth, *fig. 1.*

ANTHERÆ in tubum flavum, subangulatum, coalitæ.

ANTHERÆ united into a yellow, and somewhat angular tube.

STIGMATA duo, filiformia, reflexa.

STIGMATA two, thread-shaped, reflexed.

SEMEN ovato-oblongum, badium, sulcatum, angulis ad lentem transversim rugosis, pappum, pappo simplici, sessili, *fig. 2.*

SEED of an oblong egg-shape, bay colour, and grooved, the angles transversely wrinkled when magnified, downy, the down simple, and sessile, *fig. 2.*

This species of *Sonchus* is properly termed *arvensis*, being commonly found in corn-fields, in which its large yellow blossoms, towering above the corn, render it a very conspicuous plant; these alone are sufficient to distinguish it from the common Sow-thistle, it has besides two other very distinct characters; the one a creeping root, whereby it becomes very noxious to the husbandman; the other, numerous yellow hairs, with little globules at their extremities, thickly spread over the calyces and flower-stalks.

It blossoms in *July* and *August*; many of its seeds prove abortive.



Hieracium Pilosella.

HIERACIUM PILOSELLA. MOUSE-EAR.

HIERACIUM *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. nudum. *Cal.* imbricatus, ovatus. *Pappus* simplex, sessilis.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO NATURA PLENO LACTESCENTES.

HIERACIUM *Pilosella* foliis ovatis integerrimis tomentosis, stolonibus repentibus, scapo unifloro. *Lin. Syst. Vegetab.* p. 597. *Sp. Pl.* p. 1125. *Fl. Suec.* n. 697.

HIERACIUM caule unifloro, stolonibus reptantibus, foliis petiolatis, ovatis, longe pilosis, subtus tomentosis. *Haller. Hist.* n. 53.

HIERACIUM *Pilosella.* *Scopoli Fl. Carniol.* n. 966.

PILOSELLA major repens hirsuta. *Bauh. Pin.* 262.

PILOSELLA minor vulgaris repens. *Parkinson* 690.

PILOSELLA repens. *Ger. emac.* 638. *Raii Syn.* p. 170. Common creeping Mouse-Ear. *Hudson Fl. Angl.* p. 343. *Lightfoot Fl. Scot.* p. 436.

RADIX perennis, fibrosa, fibris, pallide fuscis.

FOLIA petiolata, ovata, sæpe oblonga, integerrima, superne virentia, scabriuscula, inferne alba, tomentosa, utrinque pilis longis obsita, e centro foliorum ad basin caulis, oriuntur stolones teretes, repentes, hirsuti, foliosi, foliis ut plurimum lanceolatis.

SCAPUS: ex una planta seu rosula exurgit scapus plerumque solitarius, palmaris, spithamæus et ultra, erectus teres, nudus, fistulosus, inferne pilosus, superne hirsutus, uniflorus.

FLORES pallide lutei, seu sulphurei, extimis flocculis inferne purpurascens.

CALYX communis imbricatus, squamis pluribus, linearibus, valde inequalibus, *fig.* 1, 2, hirsutis, pilis nigricantibus, ad lentem globiferis.

COROLLA composita, imbricata, uniformis; *Corollulis* hermaphroditis, numerosis, æqualibus; *propria* monopetala. *Tubus* pappo longior, albus, lanatus. *Limbus* planus, quinque-dentatus, longitudine tubi, *fig.* 3, 4.

STAMINA: FILAMENTA quinque capillaria, brevissima. ANTHERÆ in tubum cylindricum, flavum coalitæ, *fig.* 5.

PISTILLUM: GERMEN oblongum. STYLUS filiformis, longitudine staminum. STIGMATA duo, revoluta, *fig.* 6.

SEMEN oblongum, nigricans, striatum. *Pappus* semine duplo longior, sessilis, simplex, *fig.* 7, 8.

ROOT perennial, fibrous, the fibres of a pale brown colour.

LEAVES standing on foot-stalks, ovate, often oblong, perfectly entire, on the upper side green and roughish, on the under side white and downy, on both sides beset with long hairs, from the centre of the leaves, at the base of the stalk, spring one or more round, creeping, hirsute, leafy runners, with leaves for the most part lanceolate.

STALK: from a single plant or offset arises generally one solitary stalk, from four to seven inches or more in height, upright, round, naked, hollow, below hairy, above hirsute, supporting a single blossom.

FLOWERS of a pale yellow, or sulphur colour, the outermost florets purplish on the under side.

CALYX: the common Calyx imbricated, the scales numerous, linear, very unequal, *fig.* 1, 2. hirsute, the hairs blackish, and when magnified globular at the extremity.

COROLLA compound, imbricated and uniform, the *Florets* hermaphrodite, numerous, equal, and monopetalous. The *Tube* longer than the pappus, white and woolly. The *Limb* flat, having five teeth, the length of the tube, *fig.* 3, 4.

STAMINA: five capillary FILAMENTS, very short. ANTHERÆ united in a cylindrical, yellow tube, *fig.* 5.

PISTILLUM: GERMEN oblong. STYLE filiform, the length of the stamens. STIGMATA two, rolled back, *fig.* 6.

SEED oblong, blackish, striated. *Down* twice the length of the seed, sessile, and simple, *fig.* 7, 8.

The ancient Botanists fancied some similitude betwixt the hairy leaves of this plant and a mouse's ear, whence its name.

Of the whole genus of Hawk-weed this is the most universally common in this country. It delights in dry and exposed situations, which are frequently rendered barren by long continued drought; the sunny bank, the lifeless wall, and arid heath, are often enamelled with its lively flowers, which appear in *May* and *June*, and frequently produce a second crop late in the summer.

It has been received into the shops under the name of *Auricula muris*, and considered as possessing an astringent quality; but at present, in this respect, is but little regarded.

SIMON PAULI discovered on its roots small tubercles, which he considered as the eggs of an unknown insect; these have since proved to be a *Coccus* (*Coccus Pilosella*, *Lin.*) nearly related to the *Coccus polonicus*, an insect used in dying. We have not heard of its having been observed here.



Arctium Lappa

ARCTIUM LAPPA. BURDOCK.

ARCTIUM *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Cal. globosus; squamis apice hamis inflexis.

Raii Syn. Gen. 9. HERBÆ FLORE EX FLORIBUS FISTULARIBUS COMPOSITO SIVE CAPITATÆ.

ARCTIUM *Lappa* foliis cordatis inermibus petiolatis. *Lin. Syst. Vegetab.* p. 603. *Sp. Pl.* 1143. *Fl. Suec.* n. 712.

LAPPA *Haller Hist.* n. 161.

LAPPA major seu Arctium Dioscoridis. *Baub. Pin.* 198.

PERSONATA five Lappa major aut Bardana. *J. B.* III. 570.

BARDANA major. *Ger. emac.* 809.

BARDANA vulgaris major. *Park.* 1222. *Raii Syn.* 197. Great Burdock, Clot-burr. *Hudson. Fl. Angl. ed. 2.* p. 348. *Lightfoot Fl. Scot.* p. 197. *Oeder Fl. Dan.* t. 642.

RADIX biennis, simplex, profunde in terram descendens, foris nigricans, intus alba.	ROOT biennial, simple, penetrating deeply into the earth, externally blackish, internally white.
CAULIS erectus, tripedalis et ultra, crassitudine pollicis, ad basin usque ramosissimus, teres, striato-fulcatus, villosus, purpurascens.	STALK upright, three feet high and more, the thickness of one's thumb, branched quite down to the bottom, round, grooved, but not deeply, hoary and purplish.
FOLIA amplissima, petiolata, alterna, cordata, subtus albida, venosa, margine subundulatâ, crenulatâ.	LEAVES very large, standing on footstalks, alternate, heart-shaped, whitish underneath, veiny, the edge somewhat waved and notched.
PETIOLI foliis breviores, sulcato-angulati, villosi.	LEAF-STALKS shorter than the leaves, angular or grooved, and hoary.
FLORES purpurei, pedunculati, erecti, ramulis alterne dispositi, superne in capitula laxa collecti.	FLOWERS purple, standing on footstalks, upright, disposed alternately on the branches, and at the tops of them collected into loose heads.
CALYX communis globosus, imbricatus, glaber, filis araneosis intertextus, squamis exterioribus apice hamatis, hamis nitidis, acutissimis, subinflexis, <i>fig. 1, 2.</i> interioribus linearibus, apice vivide purpureis, simplicibus, sine hamis.	CALYX common to all the florets globular, imbricated, surface shining, cobwebby, the exterior scales hooked at the extremity, hooks shining, very sharp, and somewhat bent in, <i>fig. 1, 2.</i> inner scales linear, tops of a bright purple colour, simple, without hooks.
COROLLA composita, calyce longior, tubulata, propria infundibuliformis, tubo filiformi, albo, limbo tubuloso-campanulato, purpureo, quinque-fido, acuto, erecto.	COROLLA compound, longer than the calyx, tubular, Florets funnel-shaped, tube filiform, white, limb tubular, and somewhat bell-shaped, of a purple colour, divided into five upright, pointed segments.
STAMINA: FILAMENTA quinque alba, capillaria; ANTHERÆ carulescentes, aut violaceæ, in tubum extra corollam coalitæ.	STAMINA: five white capillary FILAMENTS; ANTHERÆ blueish, or violet coloured, united into a tube, which projects beyond the corolla.
PISTILLUM: GERMEN subtriquetrum, album, incurvatum; STYLUS albus, staminibus longior, utrinque sulcatum; STIGMA bifidum.	PISTILLUM: GERMEN somewhat three-cornered, white, bending inward; STYLE white, longer than the stamens, grooved on each side; STIGMA bifid.
SEMINA oblonga, basi attenuata, punctis prominentibus coronata, compressa, subangulata, reticulato-rugosa, exterioribus incurvatis. <i>Pappus</i> obsoletus, rigidulus. <i>fig. 3.</i>	SEEDS oblong, tapering towards the base, crowned with small prominent points, flattened, somewhat angular, surface wrinkly, in the form of net-work, outermost seeds bending inward. <i>Down</i> obsolete, somewhat rigid. <i>fig. 3.</i>

The antient botanists divided the Burdock, which they distinguished by the several names of *Lappa* * *Personata*, and *Arctium* or *Arcium* into two principal species, viz. the *Lappa major Arcium* *Diosc. C. B.*; and the *Lappa major montana capitulis tomentosis five Arctium* *Diosc. C. B.*; both of which are admirably figured by MATTHIOLUS on wood, as indeed are most of the medicinal plants; later botanists have made the species much more numerous; in the third edition of RAY's *Synopsis* we find no less than six species and one variety, viz.

1. *Lappa major capitulo glabro maximo.*
2. *Lappa major Arcium Dioscoridis.*
3. *Lappa major capitulis parvis glabris.*
4. *Lappa major montana capitulis tomentosis; five Arctium Dioscoridis.*

* *Lappa* dici potest vel ἀπὸ τῆ λαβῆν prehendere vel ἀπὸ τῆ λαπῆν, i. e. lambere, quod prætereuntium vestibus adhæreat. *Personata* autem dicitur, quod folia ejus prægrandia veluti larvæ aut personæ vice obtendi solita essent. Veteribus *Arctium* aut *Arcium* dicta creditur, verum ratio nominis ignoratur. *Raii Hist.* p. 332.

5. *Lappa major montana*, capitulis minoribus, rotundioribus & magis tomentosis.

6. *Lappa major ex omni parte minor*, capitulis parvis eleganter reticulatis.

Lappa vulgaris major capitulis foliosis. Var.

All these are however considered by the botanists of the present day as one species, to which may be added a variety with white flowers, which often occurs.

The Burdock is a very common plant by way sides, and in waste places, and flowers in July and August.

In the size of its leaves it may sometimes dispute the palm with the Butterburr; painters often introduce them in the foregrounds of their pictures, which they are admirably well calculated to embellish.

No sort of cattle relish the foliage of this plant, but snails, slugs, and many species of caterpillars feed on it deliciously; the pith produces its particular moth, which does not appear to be described by LINNÆUS, but is most accurately figured by SEPP*, and called by Aurelians the *Mottled Orange*, the caterpillar of this moth changes into chrysalis about the beginning of August, during which month it may be found in that state by splitting the stalks of such plants as appear stunted in their growth; the moth comes out about the end of August, and is one of those whose bodies are extremely apt to become greasy, to prevent which the body should be carefully opened on the under side, and its contents taken out previous to its being placed in the cabinet. A small larva, not peculiar to this plant, feeds also betwixt the coats of the leaf.

The seeds, like those of the thistle tribe, are sought for by several of the feathered songsters, and are even recommended to fatten poultry†.

The microscope informs us, *vide fig. 1, 2.* why the burrs adhere so closely to one's cloaths, and why boys, who divert themselves by throwing them at one another, have so much difficulty in extricating them from their hair.

As a weed it is not so formidable as it appears to be, being a biennial the husbandman has only to destroy its seedlings.

The root and stalks are esculent and nutritive; the stalks for this purpose should be cut before the plant flowers, the rind peeled off, and then boiled and served up in the manner of Chardoons, or eaten raw, as a salad, with oil and vinegar. *Lightfoot Fl. Scot. p. 446.*

The seeds have a bitterish, subacid taste, they are recommended as very efficacious diuretics, given either in the form of emulsion or in powder to the quantity of a drachm. The roots taste sweetish, with a slight austerity and bitterishness; they are esteemed aperient, diuretic and sudorific, and said to act without irritation, so as to be safely ventured on in acute disorders. Decoctions of them have of late been used in rheumatic, gouty, and other disorders, and preferred by some to those of Sarsaparilla. *LEWIS'S Disp. p. 101.*

* *Nederlandse Insecten. t. 3.*

† *Stirp. indig. Aragon. p. 113.*

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CICHORIUM INTYBUS. BLUE SUCCORY.

Chicorée. s. f.

Chicory.

Barbe-de-Capucin, when blanch'd

CICHORIUM Lin. Gen. Pl. SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. subpaleaceum. Cal. calyculatus. Pappus sub-5-dentatus, obsolete pilosus.

Raii Syn. Gen. 6. HERBÆ FLORE COMPOSITO NATURA PLENO LACTESCENTES.

CICHORIUM Intybus floribus geminis sessilibus, foliis runcinatis. Lin. Syst. Vegetab. p. 602. Sp. Pl. p. 1142. Fl. Suec. n. 711.

CICHORIUM foliis pinnatis, pinnis triangularibus dentatis, floribus sessilibus. Haller Hist. 1.

CICHORIUM Intybus. Scopoli Fl. Carn. n. 991.

CICHORIUM sylvestre five officinarum. Bauhin Pin. 126.

INTYBUS sylvestris. Camer. epit. 285.

CICHORIUM sylvestre. Ger. emac. 284. Parkins. 776. Raii Syn. p. 172. Wild Succory. Hudson Fl. Angl. ed. 2. p. 348.

RADIX perennis, externe lutescens, fusiformi-cylindrica, etiam ramosa, crassitie digiti, spithamæa, sæpe pedalis, descendens, fibrillosa, fibrillis sparsis, lactescens, lacte albo.

CAULIS pedalis, ad tripedalem, erectus, rigidus, tortuosus, scabridus, plerumque ramosissimus.

FOLIA radicalia plurima, taraxaci, subaspera, caulina læviora, subamplexicaulia, alterna.

FLORES plerumque bini, speciosi, sessiles, e foliorum supremorum alis.

CALYX communis calyculatus, squamis exterioribus quinque, ovatis, acutis, subpatentibus, pilis glanduliferis ciliatis; interioribus octo circiter, lineari-lanceolatis, æqualibus, cylindrum angulosum, viscosum, constituentibus. fig. 1, 2, 3, 4.

COROLLA composita, plana, uniformis, Corollulis hermaphroditis, viginti circiter, cæruleis, Tubus cylindricus, brevis, albus, apice dilatatus et pilosus; Limbus planus, quinque-dentatus, subtus nervosus et villosus. fig. 5.

STAMINA: FILAMENTA quinque alba, capillaria, manifeste libera; **ANTHERÆ** saturate cæruleæ, in tubum cylindricum, angulatum coalitæ. fig. 6.

PISTILLUM: GERMEN subconicum, album, pilis brevissimis coronatum; **STYLUS** filiformis, albus; **STIGMATA** duo, cærulea, revoluta. fig. 7.

SEMINA plurima, in fundo calycis, nuda, subpentagona, margine pilis brevissimis ciliata. fig. 8. auct.

ROOT perennial, externally of a yellowish colour, tapering very gradually to a point, also branched, the thickness of the finger, a span, and often a foot in length, striking downward, furnished with few small fibres, milky, the milk of a white colour.

STALK from one to three feet in height, upright, rigid, crooked, roughish to the touch, and generally very much branched.

LEAVES at the root numerous, like those of Dandelion, roughish, those of the stalk smoother, alternate, partly surrounding the stem.

FLOWERS growing generally in pairs, showy, sessile, springing from the axæ of the uppermost leaves.

CALYX common to many florets, composed of a double set of squamæ or leaves, the outermost of which are five in number, ovate, pointed, somewhat spreading, edged with glandular hairs, the innermost about eight, narrow, equal, forming an angular, clammy cylinder. fig. 1, 2, 3, 4.

COROLLA compound, flat, regular, Florets hermaphrodite, about twenty in number, of a blue colour; Tube cylindrical, short, white, dilated at top and hairy; Limb flat, with five teeth at the extremity, on the under side rib'd and villous. fig. 5.

STAMINA: five FILAMENTS, of a white colour, very slender, manifestly unconnected; **ANTHERÆ** of a deep blue colour, forming an angular, cylindrical tube. fig. 6.

PISTILLUM: GERMEN somewhat conic, crowned with very short hairs; **STYLE** thread-shaped, white; **STIGMATA** two, of a blue colour, and rolled back.

SEEDS numerous in the bottom of the calyx, naked, irregularly five cornered, the edge crowned with very short hairs. fig. 8. magnified.

That beautiful plants are often noxious weeds, agriculturally considered, we have already noticed in the Bistort, the field Convolvulus, the corn Poppy, and the perennial Perficaria; the blue Succory adds another to the catalogue.

Battersea Fields, which exhibit bad husbandry in perfection, produce this plant most plentifully; it flowers in July, August and September; like the docks it increases itself much by seed, and is to be extirpated in the same manner.

Some botanists have erroneously supposed this species of Succory to be the Endive in its wild state, but its strong perennial root sufficiently evinces the contrary. The *Cichorium Endivia*, which is an annual or biennial, and grows wild in the Corn-fields of Spain, together with the *Intybus**, is undoubtedly the parent of the cultivated *Endive*, it is not so clear which of the two is the plant celebrated by HORACE as constituting a part of his simple diet,

— — — me pascunt Olivæ

Me Cichorea, levesque Malvæ.

It is not unfrequently found wild with white flowers, and it has been discovered that the fine blue colour of the petals is convertible into a brilliant red by the acid of Ants†; Mr. MILLER the Engraver assured me, that in Germany the boys often amused themselves in producing this change of colour by placing the blossoms in an ant hill.

Wild Succory is an useful detergent, aperient, and attenuating medicine; acting without much irritation, tending rather to cool than heat the body, and at the same time corroborating the tone of the intestines. The juice taken in large quantities so as to keep up a diarrhæa, and continued for some weeks, has been found to produce excellent effects in scorbutic and other chronical disorders. Lewis's Disp. p. 125.

* D'Affo Stirp. Arragon, p. 113.

† Trag. ad Brunfels. II. p. 274.



Cichorium Intybus.

BIDENS TRIPARTITA. TRIFID HEMP-AGRIMONY.

BIDENS *Lin. Gen. Pl.* SYNGENESIA POLYGAMIA ÆQUALIS.

Recept. paleaceum. *Pappus* aristis erectis scabris. *Cal.* imbricatus. *Cor.* rarius flosculo uno alterne radiante instruitur.

Raii Syn. Gen. 8. HERBÆ FLORE COMPOSITO DISCOIDE SEMINIBUS PAPPO DESTITUTIS CORYMBIFERÆ DICTÆ.

BIDENS *tripartita* foliis trifidis, calycibus subfoliosis feminibus erectis. *Lin. Syst. Vegetab.* p. 610. *Sp. Pl.* 1165. *Fl. Suec.* 283. *Lappon.* p. 234.

BIDENS foliis petiolatis trilobatis et quinque lobatis serratis floribus circumvallatis. *Haller Hist.* n. 121.

BIDENS *tripartita.* *Scop. Fl. Carn.* n. 1090.

VERBESINA seu Cannabina aquatica flore minus pulchro, elatior et magis frequens. *J. B.* II. 1073.

CANNABINA aquatica folio tripartito diviso. *Baub. pin.* 321.

EUPATORIUM cannabinum foemina, *Ger. emac.* 711.

EUPATORIUM aquaticum duorum generum. *Parkins.* p. 595. *Raii Syn.* p. 187. Water Hemp-Agrimony, with a divided Leaf. *Hudson. Fl. Angl. ed. 2.* p. 355. *Lightfoot Fl. Scot.* p. 461.

RADIX annua, simplex, fibrosa, fibris albidis.
CAULIS pedalis ad tripedalem, erectus, ramosus (ramis oppositis), teretiusculus, modice fulcatus, rubens, solidus, glaber, scabriusculus.
FOLIA opposita, petiolata, connata, glabra, tripartita, aut etiam quinque partita, laciniis profunde serratis, suprema indivisa, dentato-serrata, aut etiam integra, pilis haud infrequenter ciliata.
FLORES lutei, terminales, subnutantes.
CALYX: Foliola plura, plerumque integra, lanceolata, ciliata, flores involucri instar ambientia; squamæ calycis communis ovato lanceolatae, integrae, lineis plurimis, nigricantibus, parallelis, pictæ, marginibus flavescens. *fig. 1.*
COROLLULÆ hermaphroditæ, tubulosæ, infundibuliformes, luteæ, striis quinque purpureis externe notatæ; limbo quinquefido, suberecto. *fig. 2.*
STAMINA: FILAMENTA quinque capillaria; ANTHERÆ in tubum cylindricum coalitæ. *fig. 3.*
PISTILLUM: GERMEN subcompressum, angulatum, superne latius, aristis tribus plerumque instructum, unicâ brevior; *fig. 3.* STYLUS simplex, longitudine staminum; STIGMATA duo oblonga, reflexa. *fig. 4, 5.*
SEMEN oblongum, compressum, angulatum, fuscum, aristis duabus seu tribus retrorsum scabro hâ-matis instructum. *fig. 6.*
RECEPTACULUM paleaceum, planum, paleis lanceolato-linearibus, lineatis, deciduis. *fig. 7.*

ROOT annual, simple and fibrous, fibres whitish.
STALK from one to three feet high, upright, branched, (the branches opposite), roundish, moderately grooved, of a reddish colour, solid, smooth to appearance, but slightly rough to the touch.
LEAVES opposite, standing on footstalks, which unite at the base, smooth, divided into three, and sometimes five segments, which are deeply serrated, the uppermost leaves undivided, either indented at the edge, or entire, and not unfrequently edged with hairs.
FLOWERS yellow, terminal, drooping a little.
CALYX: several, small, lanceolate leaves, generally entire, but edged with hairs surrounding the flowers like an involucre; the scales of the calyx common to all the florets are ovate and pointed, entire at the edge, and painted with numerous blackish lines, the edges are yellowish. *fig. 1.*
FLORETS hermaphrodite, tubular, funnel-shaped, of a yellow colour, marked externally with three purplish stripes, the limb divided into five segments, which are nearly upright. *fig. 2.*
STAMINA: five capillary FILAMENTS; ANTHERÆ united into a cylindrical tube. *fig. 3.*
PISTILLUM: GERMEN flattish, angular, broadest at top, generally furnished with three awns, of which one is shorter than the rest; *fig. 3.* STYLE simple, the length of the stamens; STIGMATA two, oblong, turning back. *fig. 4, 5.*
SEED oblong, flat, angular, brown, furnished with two or three awns, which are hooked or barbed downward. *fig. 6.*
RECEPTACLE chaffy and flat, scales or chaff, narrow, marked with lines and deciduous. *fig. 7.*

This species of *Bidens* is much more common than the *cernua*, as that is generally found in the water, this more frequently occurs on the borders of ponds, rivulets, &c. where it flowers in the months of August and September, at the close of which it ripens its seeds.

It is obviously distinguished from the *cernua* by having its leaves, for the most part, divided into three segments, whence its name; this character is more to be depended on than the uprightness of its flowers, as they generally droop a little when the plant is in perfection.

LINNÆUS, and other writers, recommend it as a plant that will dye both linen and woollen of a yellow colour, for this purpose the yarn or flax must be first steeped in allum-water, then dried and steeped in a decoction of the plant, and afterwards boiled in the decoction. *Haller. Hist. Helv.* p. 52.



Bidens tripartita.



JASIONE MONTANA. HAIRY SHEEP'S-SCABIOUS.

JASIONE *Lin. Gen. Pl.* SYNGENESIA MONOGAMIA:

Cal. communis 10-phyllus. *Cor.* 5-petala; regularis. *Capf.* infera, bilocularis.

JASIONE *montana. Lin. Syst. Vegetab.* p. 666. *Spec. Pl.* p. 1317. *Fl. Suec.* n. 782.

RAPUNCULUS foliis linearibus subasperis, spica planiuscula, petalis liberis. *Haller Hist.* n. 678:

RAPUNCULUS scabiosæ capitulo cæruleo. *Baubin Pin.* 92.

RAPUNTIUM montanum capitatum leptophyllum. *Col. Ecphr.* 1. p. 226. t. 227.

SCABIOSA globularis quam ovinam vocant *J. B.* III. 12.

SCABIOSA minima hirsuta. *Ger. emac.* 723. *Raii Syn.* p. 278. Hairy Sheep's Scabious, or rather Rampions with Scabious Heads. *Hudson Fl. Angl. ed. 2.* p. 377. *Lightfoot Fl. Scot.* p. 377.

RADIX annua, lignosa, albida, fibrosa.

CAULES plures, suberecti, spithamæi, etiam pedales et ultra, rigiduli, ramosi, hirsuti.

FOLIA plurima, sessilia, lineari-lanceolata, obtusiuscula, undulata, hirsuta.

FLORES capitati, cærulei, summitatibus ramorum infidentes.

CALYX: *Perianthium commune* polyphyllum: foliolis alternis, interioribus angustioribus, includens flores plurimos pedunculis brevissimis adnexos, persistens. *fig. 1.*

Perianthium proprium quinquefidum, superum, persistens.

COROLLA propria pentapetala: *Petalis* lanceolatis, erectis, basi connexis. *fig. 2.*

STAMINA: FILAMENTA quinque, subulata, brevia. ANTHERÆ quinque, oblongæ, basi connexæ. *fig. 3.*

PISTILLUM: GERMEN subrotundum, inferum. STYLUS filiformis, longitudine Corollæ. STIGMA clavatum, purpureum. *fig. 4, 5.*

PERICARPIUM: CAPSULA subrotunda, quinquangularis, coronata calyce proprio, bilocularis.

SEMINA plura, subovata.

ROOT annual, rigid, whitish and fibrous.

STALKS several, nearly upright; about a span in length, but sometimes a foot or more, rather rigid, branched, and beset with short rough hairs.

LEAVES numerous, sessile, between linear and lanceolate, bluntish, waved and hirsute.

FLOWERS of a blue colour, growing in little heads on the tops of the branches.

CALYX: the *Perianthium common to all the florets* composed of many leaves, which are alternate, those of the inner-row narrowest, including numerous flowers fitting on very short footstalks, and permanent. *fig. 1.*

The Perianthium of each floret deeply divided into five segments above the germen; and permanent.

COROLLA: each floret composed of five lanceolate, upright *Petals*, connected at the base. *fig. 2.*

STAMINA: five tapering short FILAMENTS; ANTHERÆ five, oblong, connected at the base. *fig. 3.*

PISTILLUM: GERMEN roundish, below the Corolla. STYLE filiform, the length of the corolla. STIGMA club-shaped and purplish. *fig. 4, 5.*

SEED-VESSEL: a roundish CAPSULE, having five angles with two cavities, and crowned by the calyx proper to it.

SEEDS numerous, somewhat ovate.

This little plant, which in its general appearance so much resembles a Scabious, is very common on dry, sandy ground, especially about *Coomb Wood*, and *Hampstead*, and most hilly situations near *London*, and elsewhere.

It varies much in size, and is sometimes, though very rarely, found with white blossoms.

It flowers from *June* to *August*.

LINNÆUS remarks, that Bees are particularly fond of its flowers.

OPHRYS SPIRALIS. LADIES TRACES.

OPHRYS *Lin. Gen. Pl.* GYNANDRIA DIANDRIA.

Nectarium subtus subcarinatum.

Raii Syn. Gen. 21. HERBÆ RADICE BULBOSA PRÆDITÆ.

OPHRYS *spiralis* bulbis aggregatis oblongis, caule subfolioso, floribus secundis, nectarii labio indiviso crenato. *Lin. Syst. Vegetab.* p. 677. *Sp. Pl.* 1340.

EPIPACTIS bulbis cylindricis, spica spirali, labello crenulato. *Haller Hist.* n. 1294.

SERAPIAS *spiralis*. *Scopoli Flor. Carn.* n. 1125.

ORCHIS *spiralis* alba odorata. *I. B. II.* 769.

TRIORCHIS alba odorata minor, atque etiam major. *Bauhin Pin.* 84.

TRIORCHIS *Ger. emac.* 218. *Parkins.* 1354. *Raii Syn.* p. 378. Triple Ladies Traces. *Hudson Fl. Angl.* p. 388.

RADIX fit uno, duobus, tribus, quatuorve bulbis, oblongis, acuminatis, villosis.	ROOT consists of one, two, three, or four oblong, pointed, villous bulbs.
FOLIA radicalia quatuor, et ultra, supra terram expansa, ovata, acuta, hinc convexa, inde cava, semunciam lata, ad lentem punctata, obsolete nervosa.	LEAVES next the root four, or more, spread out on the ground, ovate, pointed, convex on one side, and concave on the other, half an inch in breadth, dotted when magnified, and faintly ribbed.
SCAPUS spithamæus, foliosus, foliis vaginantibus, pubescentibus, margine membranaceis.	STALK six or seven inches high, leafy, leaves sheathy, downy, and membranous at the edge.
FLORES ex albo-virescentes, odorati, quindecim et ultra, <i>spiræ modo dispositi</i> .	FLOWERS of a greenish white colour, fragrant, fifteen and more in number, <i>spirally disposed</i> .
BRACTÆA oblonga acuminata, cava, villosa, germenis cum dimidio floris longitudine, <i>fig. 1.</i>	FLORAL-LEAF oblong, pointed, hollow, villous, of the length of the germen, and half the flower, <i>fig. 1.</i>
PETALA quinque, alba, subæqualia, villosula, tria superiora subcoadunata, recta, duo lateralia carinata, lanceolata, <i>fig. 2, 3</i> , labellum Nectarii obtusum, crenulatum, intus viridulum, concavum, <i>fig. 4.</i> auct. <i>fig. 5.</i>	PETALS five, white, nearly equal, somewhat villous, the three uppermost very slightly connected together, straight, the two side ones keeled and lanceolate, <i>fig. 2, 3</i> , the lip of the Nectary blunt, finely notched, green within and hollow, <i>fig. 4</i> , magnified, <i>fig. 5.</i>
GERMEN sessile, ovatum, lineis duabus lateralibus extantibus notatum, <i>fig. 6.</i>	GERMEN sessile, ovate, marked with two protuberant side lines, <i>fig. 6.</i>

The Rev. Dr. GOODENOUGH, of *Ealing*, kindly communicated to us this plant, having found it sparingly on *Hanwel-Heath*, near *Ealing*: though scarce with us, in many parts of *England*, especially the more northern, it is not uncommon. It grows in pastures, both dry and moist, and does not particularly affect a chalky soil. In the garden it grows more readily than most of its tribe, and flowers later, its usual month of blowing being *September*.

The protuberant germina, placed regularly one above another, somewhat resemble plaited hair, whence, perhaps, its name of *Ladies Traces*. The flowers are fragrant, and, by the spiral manner in which they grow, form a curious specific character.

Baron HALLER, who has taken infinite pains with the plants of this tribe, has not very happily expressed this species; his artist appears to have had an unnatural specimen to copy from.

The Ladies Traces varies much in size as well as in the number of its roots.



Ophrys sphegodes.



Carex riparia.

CAREX RIPARIA. GREAT OR COMMON CAREX.

CAREX *Lin. Gen Pl.* MONOECIA TRIANDRIA.

MASC. Amentum imbricatum. *Cal.* 1. phyllus. *Cor.* o.

FEM. Amentum imbricatum. *Cal.* 1. phyllus. *Cor.* o. *Nectarium* inflatum, 3. dentatum. *Stigm.* 3.

SEM. Triquetrum, intra nectarium.

Raii Synop. Gen. 28. HERBÆ GRAMINIFOLIÆ NON CULMIFERÆ FLORE IMPERFECTO SEU STAMINEO.

CAREX *riparia* spicis masculis pluribus triquetris nigricantibus, acutis, squamis aristato acuminatis, capsulis subinflatis, bicornibus.

CAREX *acuta* spicis masculis pluribus, femineis subpedunculatis, erectis, capsulis ovato-lanceolatis aristato-acuminatis furcatis. *Hudson Fl. Angl. p.* 413.

CAREX spicis masculis ternis, femineis numerosis, erectis, brevissime petiolatis, capsulis bicornibus. *Haller, hist. n.* 1404. et forsan 1398 et 1399.

CAREX *acuta.* *Lightfoot Fl. Scot. p.* 565.

GRAMEN cyperoides cum paniculis nigris. *J. B.* 2. 494. *Raii Hist.* 1292.

GRAMEN cyperoides latifolium spica rufa five caule triangulo. *Bauh. Pin.* 6.

GRAMEN cyperoides. *Ger. emac.* 12.

GRAMEN cyperoides majus latifolium. *Park.* 1265. *Raii Syn.* 417. Great vernal Cyperus-grafs.

CYPEROIDES aquaticum, maximum, foliis vix unciam latis, caule exquisite triangulari, spicis habitioribus, erectis, squamis in aristam longius productis, capsulis oblongis, bifidis. *Michel. Nov. Gen. Tab.* 32. *fig.* 7. et 6.

RADIX perennis, repens.

CULMUS in aquosis bi seu tripedalis, foliosus, nodosus, striatus, triqueter, angulis acutis, asperis.

FOLIA femunciam lata, glauca, carinata, ad margines carinamque aspera, vaginantia, vagina una cum inferiore parte folii pulchre reticulata.

SPICÆ masculæ et femineæ distinctæ, masculæ, plerumque, tres, ad quinque, erectæ, nigricantes, triquetrae, acutæ, congestæ, bractæatæ, suprema biunciali, inferioribus brevioribus inæqualibus, femineæ tot quot masculæ, ovato-acutæ, pedunculatæ, plerumque erectæ, aliquando etiam pendulæ, supremis sessilibus, androgynis.

FLOS MASC.

CALYX: Squamæ plurimæ, imbricatæ, lanceolatæ, aristato-acuminatæ, e nigro purpurascens, *fig.* 1.

STAMINA: FILAMENTA tria, filiformia, alba; ANTHERÆ tenues, luteæ, mucronatæ, *fig.* 2.

FLOS. FEM.

CALYX: Squamæ ut in masc. inferne vero latiores et superne magis luculenter aristatæ, aristâ serrulatâ, *fig.* 3.

NECTARIUM germen continens, ovatum, glabrum, bicornis, *fig.* 4. auct. demum inflatum, acuminatum, striatum, fuscum. *fig.* 6. magn. natur.

PISTILLUM: GERMEN parvum, ovatum, glabrum, STYLUS filiformis, nudus, nectario paulo longior; STIGMATA tria, villosa, alba, subulata, *fig.* 5. auct.

SEMEN unicum, triquetrum, intra Nectarium, *fig.* 7. mag. nat.

ROOT perennial and creeping.

STALK in wet situations two or three feet high, leafy, jointed, striated, the angles sharp and rough.

LEAVES half an inch broad, glaucous, keeled, the keel as well as the edges rough, sheathing the stalk, the sheath, together with the lower part of the leaf, beautifully reticulated.

SPIKES of the male and female distinct, those of the male generally from three to five, upright, blackish, three-corned, pointed, clustered, and furnished with floral leaves, the uppermost about two inches in length, the lowermost shorter and unequal; female spikes as numerous as those of the male, ovate, pointed, standing on foot-stalks, generally upright, but sometimes pendulous, the uppermost sessile and androgynous.

MALE FLOWER.

CALYX: Scales numerous, imbricated, lanceolate, running out to a long beard-like point, of a purplish black colour, *fig.* 1.

STAMINA: three FILAMENTS, thread-shaped and white; ANTHERÆ slender, yellow and terminated by a short point, *fig.* 2.

FEM. FLOWER.

CALYX: Scales as in the male, but broader below, and more evidently bearded above, the awn finely sawed or toothed, *fig.* 3.

NECTARY: containing the germen, ovate, smooth, with two horns, *fig.* 4. magn. finally inflated, pointed, striated, and of a brown colour, *fig.* 6. nat. size.

PISTILLUM: GERMEN small, ovate, smooth; STYLE filiform, naked, a little longer than the nectary; STIGMATA three, villous, white and tapering, *fig.* 5. magnif.

SEED single, three-cornered, enclosed in the Nectary, *fig.* 7. nat. size.

In a former number of this work we gave a figure and description of the *Carex pendula*, one of the largest, as well as most distinct species of this genus; we here present our readers with three more of this numerous and difficult tribe. Our motive for publishing them in the same number is, that they may the more readily be compared together, and their several distinguishing characters be more forcibly impressed.

In herborizing it is a practice with me to endeavour at acquiring a perfect knowledge of every plant which occurs in all its possible varieties; the greater the difficulty I find in the attempt, the more minute is my inquiry. These investigations have to my great satisfaction often terminated in some new discovery, which has placed the plant in a more conspicuous light than before; such has been the happy result in the present instance. In passing thro' *Battersea* meadows I had frequently noticed the three Carices here figured, which I was taught to consider as the same species, varying only from particular circumstances; but so great was the variation, that I never could perfectly reconcile myself to the idea. I shall here relate the several characters which struck me first, and gave me the idea of their being different. It was the pointed, triangular, black heads or male spikes of the *riparia*, the bluntness not only of the

Paludosa - Willd. -
CAREX ACUTA. ACUTE CAREX.

CAREX *acuta* spicis masculis pluribus, obtusis, squamis obtusiusculis, caule acutangulo.

CAREX *acuta* spicis masculis pluribus, femineis subseffilibus, capsulis obtusiusculis. *Lin. Syst. Veg.* p. 706. *Sp. Pl.* p. 1388. *Fl. Suec.* n. 857.

CAREX *glauca* Scopoli *Fl. Carn.* n. 1157.?

CYPEROIDES foliis Caryophylleis, caule exquisite triangulari, spicis habitioribus, squamis curtis, obtusè mucronatis, capsulis turbinatis, brevibus, confertis. *Michel Nov. Gen.* p. 62. tab. 32. f. 12.

GRAMEN cyperoides foliis caryophylleis vulgatissimum. *Raii Hist.* 1292.

CAREX cæspitosa var. β . *Lightfoot Fl. Scot.*?

RADIX perennis, repens.

CULMUS in aquosis, bipedalis et ultra, foliosus, nodosus, striatus, triqueter, angulis acutis, asperis.

FOLIA tres lineas lata, glauca, carinata, ad margines carinamque aspera.

SPICÆ masculæ et femineæ distinctæ, masculæ plerumque tres, erectæ, remotiusculæ, oblongæ, obtusæ, e purpureo-nigræ seu fuscæ, suprema fescunciali, inferioribus brevioribus, inæqualibus, bracteata, bractea inferiore spicis brevior: femineæ duæ, vel tres, longiores, et graciliores, pedunculatæ, plerumque erectæ, apicibus sæpe masculis.

FLOS MASC.

SQUAMÆ plurimæ, arcte imbricatæ, ovato-oblongæ, obtusæ, e fusco-purpureæ, nervo medio virescente, fig. 1.

STAMINA: FILAMENTA tria, filiformia, alba; ANTHERÆ luteæ, fig. 2.

FLOS. FEM.

SQUAMÆ ovato-acuminatæ, superne ad lentem denticulis ciliatæ, fig. 3.

NECTARIUM ovatum, glabrum, ore sæpius bidentato, fig. 4.

PISTILLUM: GERMEN parvum, intra nectarium; STYLUS nectario paulo longior; STIGMATA tria, patentia, fig. 5.

SEMEN triquetrum, fig. 8, 9, intra nectarium bidentatum, fig. 6, 7.

ROOT perennial, and creeping.

STALK, in wet situations, two feet high, and upwards, leafy, jointed, striated, three-cornered, the angles sharp, and rough.

LEAVES, three lines in breadth, glaucous, keeled, the edges and keel rough.

SPIKES, male and female, distinct; male spikes generally three, upright, at a little distance from each other, oblong, obtuse, of a purplish, black, or brown colour, the uppermost an inch and a half in length, the lower ones shorter and unequal, furnished with floral leaves, of which the lowermost is shorter than the spikes; female spikes two or three, longer and slenderer than the male, standing on footstalks, for the most part upright, the tips frequently male.

MALE FLOWER.

SCALES, numerous, closely imbricated, of an ovate oblong shape, obtuse, of a brownish purple colour, the midrib greenish, fig. 1.

STAMINA: three FILAMENTS, filiform, and white; ANTHERÆ, yellow, fig. 2.

FEMALE FLOWER.

SCALES ovate, and pointed, the upper part when magnified edged with fine teeth, fig. 3.

NECTARY ovate, smooth, the mouth most commonly having two teeth, fig. 4.

PISTILLUM: GERMEN small, within the nectary; STYLE a little longer than the nectary; STIGMATA three, spreading, fig. 5.

SEED three-cornered, fig. 8, 9, contained within a nectary having two teeth, fig. 6, 7.

the spikes themselves, but of the scales composing the male spikes of the *acuta*, and the narrow leaves and slender appearance of the spikes in the *gracilis*, joined to the want of that glaucous hue in the leaves, so conspicuous in those of the two former; impressed with these general appearances, I carried home their roots, and planted them in my garden, and found, at the expiration of two years, that they still kept up the same appearances. I then attended more minutely to their parts of fructification, and found sufficient to convince me, and I trust every unprejudiced person, that they are three species immutably distinct.

The largest and perhaps the most generally common of the three is our *riparia*, which we have distinguished by that name, from its being found on the edges of rivers; it will also grow in the middle of a ditch or pond, and, if suffered to increase, will quickly fill up any piece of water, being in this respect almost equal to the *Poa aquatica*, and *Typha latifolia*; it also, by means of its powerfully creeping roots, easily makes its way through any moorish ground, and hence is often found in meadows themselves; and, though much smaller in such situations, its striking characters are equally distinct. Where it grows luxuriantly, its spikes, especially the lowermost of the female ones, frequently become branched, which gives them a very outrè appearance, that may puzzle for a moment: as the male spikes on their first appearance are so easily distinguished by their pointed and angular appearance, so the female spikes, when nearly ripe, are distinguished from the two others by having large, somewhat inflated, and pointed capsules, slightly bifid at the extremity.

The synonyms of this and the two other species are so confounded together, that to trace them through all the writers that have written on the subject, would be an endless task; it will be sufficient therefore to have quoted a few which may be depended on.

The *acuta* is next in size, at least with respect to the breadth of its leaves, to the *riparia*, and is found in situations exactly similar; indeed they very frequently grow together, and, from the great similarity of their foliage, may easily be confounded: when young, the bluntness of its male spikes and obtuseness of their squamæ, so as totally to want any kind of arista, invariably distinguishes it from the *riparia*; and though there is frequently a tendency in these spikes to be three-cornered, yet the angles are always very obtuse, to which we may add, that the colour of them before the antheræ come forth is much brighter, and sometimes a spike is found perfectly brilliant: the female spikes, as well as those of the male, are fewer in number, as well as smaller; nor have they that tendency to be pendulous which those of the *riparia* frequently have, the capsules when ripe are also much smaller, more numerous, and no ways inflated, but very similar to those of the *gracilis*; we may further remark, that while the squamæ in the male spikes before the bursting forth of the antheræ are invariably obtuse, those of the female spikes are pointed, and that while this plant in its strong state may easily be mistaken for the *riparia*; in its weak state, it approaches very near the *recurva*, which also is a species perfectly distinct.



Carex acuta.



Carex gracilis.

acuta. Willd. —
CAREX GRACILIS. SLENDER SPIKED CAREX.

CAREX *gracilis* spicis masculis et femineis pluribus, subfiliformibus, floribus digynis.

CAREX nigra verna vulgaris. *Lin. Fl. Lap.* 330. ?

CYPEROIDES angustifolium, caule exquisitè triangulari, aspero, spicis floriferis prælongis, tenuioribus, feminalibus autem spicis biuncialibus, et habitioribus, erectis, squamis, brevibus acutis, capsulis spadiceo viridibus, rhomboideis, subtriquetris. *Micheli Nov. Gen.* p. 60. n. 40.

GRAMEN cyperoides majus angustifolium. *Park.* 1265. *Raii Hist.* 1293. *Syn.* p. 417, n. 2. Great narrow-leaved vernal Cyperus-grass.

RADIX perennis, repens.

CULMUS in aquosis bi seu tripedalis, in pratis humilior, foliosus, nodosus, triqueter, angulis acutis, asperrimis.

FOLIA *radicalia* longa, viridia, vix glauca, lineas duas lata, ad margines et carinam aspera, vaginantia, *bractæalia* lineam cum dimidia lata, inferiore (florente planta) spicis longiore.

SPICÆ masculæ et femineæ distinctæ, masculæ plerumque tres, e fusco nigricantes, graciles, obsolete triquetrae, nutantes, terminalis biuncialis, inferior duplo aut triplo brevior, infima sæpius androgyna, longior, femineæ tres aut quatuor, teretes, graciles, longitudine masculi terminalis, sessiles seu breviter pedunculatæ, suberecti, nigricantes.

MAS.

SQUAMÆ ovato-acutæ, arcu imbricatæ, carinatæ, e purpureo nigricantes, carina subviridi, *fig. 1. auct.*

STAMINA: FILAMENTA tria, capillaria, alba; ANTHERÆ lineares, flavæ, *fig. 2.*

FEM.

SQUAMÆ maf. fimiles, magis vero oblongæ ac obtusæ, *fig. 3.*

NECTARIUM oblongum, glabrum, ore integro; GERMEN minimum; STYLUS nectario longior; STIGMATA duo, villosa, *fig. 4. 5.*

SEMEN triquetrum, minimum, intra nectarium, *fig. 6.*

ROOT perennial and creeping.

STALK, in watery situations two or three feet high, in meadows not so tall, leafy, jointed, three-cornered, the angles sharp and very rough to the touch.

LEAVES from the root long, of a green colour, scarcely glaucous, two lines in breadth, on the edges and midrib rough, sheathing the stalk, *bractæal* leaves a line and a half in breadth, the lowermost, while the plant is in flower, longer than the spikes.

SPIKES, both male and female, growing distinctly, the male generally three in number, of a brownish black colour, slender, faintly three-cornered, drooping, the terminal spike about two inches in length, the next below twice or thrice as short, the lowermost for the most part androgynous and longer, female three or four, round, slender, length of the terminal male spike, sessile or standing on short footstalks, nearly upright and blackish.

MALE.

SCALES ovate, pointed, lying closely one over another, keeled, of purplish black colour, the keel greenish, *fig. 1. magnif.*

STAMINA: three FILAMENTS, slender and white; ANTHERÆ linear and yellow, *fig. 2.*

FEMALE.

SCALES as in the male, but more oblong and blunter, *fig. 3.*

NECTARY oblong, smooth, the mouth entire; GERMEN very small; STYLE longer than the Nectary; STIGMATA, two, villous, *fig. 4. 5.*

SEED, three-cornered, very minute, within the nectary, *fig. 6.*

If the season be mild, this plant and the *riparia* flower in April, and ripen their seeds in June and July.

The *gracilis*, though a slenderer plant both in stalks, leaves, and spikes, is equal in height where it grows in similar situations to either of the other two; but as this has a greater tendency, at least in Battersea Meadows to grow among the herbage, it is frequently found shorter, and sometimes large patches of its foliage are visible without any flowering spikes.

This species is distinguished from the other two, not only by having narrower leaves, which want the glaucous colour of the other two, and slenderer spikes, which in their young state are remarkably pendulous, so as at first sight to give this plant an appearance of the *Carex pendula*, but the female flowers are constantly and invariably digynous. My most obliging friend Dr. GOODENOUGH, to whom I had communicated my thoughts on this subject, examining these plants with his usual accuracy, anticipated me in the discovery of this most important, most necessary character; a character which in a moment decidedly distinguishes betwixt two plants, which without it would for ever have been liable to be confounded.

We should have been inclined to suppose that our *gracilis* was the *acuta* of LINNÆUS, had he not quoted MICHELI'S figure, to which he adds the epithet *bona*; that figure is a tolerable representation of our *acuta*, but the spikes are far too thick for those of the *gracilis*.

This species, which is equally common with the two others, flowers a week or two later.

Agriculturally considered, it is perhaps doubtful, whether we are to rank the Carices with the useful or the noxious plants; from what we have hitherto observed, we should rather class them with the latter, not but we think the *Junci*, *Scirpi*, &c. infinitely more injurious, yet still they occupy the room of better grasses; their principal merit is, that they afford early pasturage, yet their foliage is harsh and rough, and productive of indifferent hay; and such is the opinion of LINNÆUS, who, in his *Flora Lapon.* remarks, that the husbandman is not fond of such meadows as are over-run with Carices, as they afford bad fodder and unprofitable pasturage "*nec pinguescat bos carice pastus acuta*;" unfortunately, however, when the present species, or such as have similar creeping roots, have once got possession of the soil, they are the most difficult plants possible to eradicate.

As articles of rural œconomy, they are in many instances highly useful: in Hampshire, Surrey, and, perhaps, other hop counties, the leaves of these three species are used indiscriminately under the name of *Sedge*, for tying the young hop plants to the poles. MICHELI informs us, that in Italy they are used to cover their wine flasks, to make the common sort of chair bottoms, and that the Coopers in making tubs, &c. place them betwixt the staves to make them water-tight: to the comfort of the Laplander, they contribute in a high degree,

degree, by defending him from the severity of the weather ; this is so particularly described by LINNÆUS in his *Flora Lapon.* that we shall translate it for such of our readers as may not have an opportunity of consulting the original, now become very scarce :

“ Thou wilt wonder, perhaps, curious reader, in what manner human beings are capable of preserving life during the intense severity of a winter’s frost in Lapland, a part of the world deserted on the approach of winter by almost every kind of bird and beast.

“ The inhabitants of this inhospitable climate are obliged to wander with their Rhendeer flocks continually in the woods ; not only in the day-time, but through the longest winter nights, their cattle are never housed, nor do they eat any other food than Liverwort ; hence the herdsmen, to secure them from wild beasts, and other accidents, are of necessity kept perpetually with them. The darkness of their nights is in a great degree overcome and rendered more tolerable by the light of the stars reflected from the snow, and the Aurora Borealis, which in a thousand fantastic forms nightly illumines their hemisphere. The cold is intense, sufficient to frighten and drive us foreigners from their happy woods. No part of our bodies are so liable to be destroyed by cold as the extremities, which are situated farthest from the heart ; the chilblains of the hands and feet, so frequent with us in Sweden, sufficiently indicate this. In no part of Lapland do we find the inhabitants affected with chilblains, though in respect to country one would expect them to be peculiarly subject to this disease, especially as they wear no stockings, while we clothe ourselves in one, two, and even three pair.

“ A Laplander preserves himself from the violence of cold in the following manner : he wears breeches, or rather trowsers, made of the rough skin of the Rhendeer, which reach to his ancles, and shoes made of the same material, the hair turned outward ; this grass, cut down in the summer, dried, rubbed betwixt the hands, and afterwards combed or carded, he puts into his shoes, so as not only wholly to enwrap his feet, but the lower part of his legs also, which, thus defended, never suffer from the severest cold ; with this grass he also fills his hairy gloves to preserve his hands, and thus are those hardy people enabled to bear the frost.

“ As this grass in the winter drives away cold, so in the summer it checks the perspiration of the feet, and preserves them from being injured by stones, &c. in travelling, for their shoes are extremely thin, being made of untanned skins. It is difficult to learn, on inquiry, what the particular species of grass is which is thus in request with these people, as some use one sort, some another. It is, however, always some species of *Carex*, and we understood chiefly this.”

It is no less difficult to understand what species LINNÆUS himself means : he quotes *Morison’s* figure, which is our *sylvatica* ; yet says, that the *Carex* grows in *paludibus limo plenis*, which that plant never does with us, it is most likely, in our opinion, to be one or all of the three common species here figured.



Pariclararia officinalis

PARIETARIA OFFICINALIS. PELLITORY OF THE WALL.

PARIETARIA *Lin. Gen. Pl.* POLYGAMIA MONOECIA.

HERMAPHROD. *Cal.* 4-fidus. *Cor.* o. *Stamina* 4. *Styl.* 1. *Sem.* 1. superum, elongatum.

FEM. *Cal.* 4-fidus. *Cor.* o. *Stam.* o. *Stylus* 1. *Sem.* 1. superum, elongatum.

Raii Syn. Gen. 5. HERBÆ FLORE IMPERFECTO SEU STAMINEO VEL APETALO POTIUS.

PARIETARIA *officinalis* foliis lanceolato-ovatis, pedunculis dichotomis, calycibus diphyllis. *Lin. Syst. Vegetab.* p. 763. *Sp. Pl.* p. 1492.

PARIETARIA foliis elliptico-lanceolatis, hirsutis. *Haller. Hist.* p. 162.

PARIETARIA *officinalis.* *Scopoli Fl. Carn.* n. 1242.

PARIETARIA officinarum et Dioscoridis. *Baub. pin.* 121.

HELXINE *Camerar. Epit.* p. 849.

PARIETARIA *Ger. emac.* 331. vulgaris *Parkinsf.* 437. *Raii Syn.* p. 158. Pellitory of the Wall. *Lightfoot Fl. Scot.* p. 835. *Hudson Fl. Angl. ed. 2.* p. 442. *Oeder Fl. Dan. t.* 521.

RADIX perennis, sublignosa, rubens, fibrosa.

CAULES plures, suberecti, dodrantes, pedales et ultra, ramosissimi, teretes, striati, solidi, rubentes, pubescentes; rami cauli similes, alterni, diffusi.

FOLIA alterna, petiolata, ovata, acuta, utrinque attenuata, integerrima, patentia, ad margines et venas subtus præcipue pubescentia, supra saturate viridia, lucida, subrugosa, punctis prominulis adspersa.

PETIOLI longitudine fere diametri foliorum, pubescentes, supra canaliculati.

FLORES parvi, herbacei, hirsuti, sessiles, in axillis foliorum conglomerati, hermaphroditi et feminei.

Hermaphroditi Flores duo continentur involucri heptaphyllo, persistente, foliolis ovatis, acutis planis, hirsutis, hirsutie glandulosâ. *fig. 1.*

CALYX: PERIANTHIUM monophyllum, quadrifidum, planum, persistens. *fig. 9.*

COROLLA nulla, nisi calycem dicas.

STAMINA: FILAMENTA quatuor, alba, transversim rugosa, instante anthesi elastice resiliencia, calycemque expandentia; ANTHERÆ ovatae, obtusæ, didymæ; POLLEN album. *fig. 4.*

PISTILLUM: GERMEN ovatum, viride, nitidum, nudum; STYLUS filiformis; STIGMA penicilliforme, capitatum, ruberrimum. *fig. 6.*

PERICARPIUM nullum. *Perianthium* elongatum, majus, campanulatum, coloratum, deciduum; ore laciniis conniventibus clauso. *fig. 3.*

SEMEN unicum, ovatum, nitidum, in fundo perianthii.

Femineus flos unus inter hermaphroditos ambos, intra involucrium.

CALYX quadrifidus, hirsutus, erectus, germen involvens. *fig. 5.*

COROLLA nulla.

PISTILLUM ut hermaphroditi, at stigma majus et paulo inflexum. *fig. 5.*

PERICARPIUM nullum.

SEMEN unicum ut in hermaphrodito, calyce quadrifido et vix mutato inclusum. *fig. 7, 8.*

ROOT perennial, somewhat woody, of a red colour, and fibrous.

STALKS several, nearly upright, from nine inches to a foot or more in height, very much branched, round, striated, solid, reddish, and downy; branches like the stalks, alternate and spreading.

LEAVES alternate, standing on foot-stalks, ovate, pointed, tapering towards each extremity, entire at the edge, spreading, particularly downy at the edge and on the veins of the under-side, on the upper-side of a deep green colour, shining, somewhat wrinkled, and covered over with small prominent points.

LEAF-STALKS nearly the length of the diameter of the leaves, downy, hollowed above.

FLOWERS small, of a greenish colour, rough, sessile, growing in clusters in the axæ of the leaves, hermaphrodite and female.

Two *Hermaphrodite Flowers* are contained in an *involucrium* composed of seven leaves, and permanent, the leaves ovate, pointed, flat, hirsute, the hairs glandular at the extremities. *fig. 1.*

CALYX: a PERIANTHIUM of one leaf, deeply divided into four segments, which are flat and permanent. *fig. 9.*

COROLLA none, unless the calyx be called so.

STAMINA: four FILAMENTS of a white colour, wrinkled transversely, on the shedding of the pollen flying back with an elasticity, and expanding the calyx; ANTHERÆ ovate, obtuse, double; POLLEN white. *fig. 4.*

PISTILLUM: GERMEN ovate, green, shining and naked; STYLE filiform; STIGMA forming a bright scarlet tuft. *fig. 6.*

SEED-VESSEL none. The *Perianthium* becoming elongated, larger, bell-shaped, coloured and deciduous; the mouth shut by the segments closing together. *fig. 3.*

SEED single, ovate, shining in the bottom of the perianthium.

One *Female flower* betwixt two hermaphrodite ones, within the involucrium.

CALYX divisible into four segments, hairy, upright, inclosing the germen. *fig. 5.*

COROLLA none.

PISTILLUM as in the hermaphrodites, but the stigma somewhat larger, and bent a little down. *fig. 5.*

SEED-VESSEL none.

SEED single, like that of the hermaphrodites, inclosed in the quadrifid calyx, which is but slightly altered. *fig. 7, 8.*

The

The flowers of the *Parietaria* are so small, and so difficult to investigate, that we need not wonder at their being described differently by different botanists; LINNÆUS's description, in his *Genera Plantarum*, accords best with our observations, his therefore we have adopted with some few alterations.

We find only two sorts of flowers on this plant, viz. hermaphrodite and female; of these, two hermaphrodite and one female blossom are generally placed together in one common involucre, the female blossom intermediate. To obtain a perfect idea of the manner in which the fructification is carried on, we must examine these flowers at a very early period of their expansion, we shall then find in each involucre three red stigmata, the two outermost of which belong to hermaphrodite flowers; whose stamens are not yet visible; the middle one, which is largest and most conspicuous, to the female. If we take a view of the same blossoms just at the time that the elastic filaments by their sudden expansion scatter the fertilizing dust of the antheræ, the styles and stigmata of the hermaphrodite flowers, visible before, will often be found wanting, and the germen left naked in the center of the flower; at this period of the blossoming, the segments of the calyx in the same flowers are nearly of the same length as the filaments, the style and stigma of the female blossom remain perfect, with its germen closely surrounded by a green, hairy calyx, which never expands: the blossoming period being now over, a considerable alteration takes place in the calyx of the hermaphrodite flowers, each is considerably elongated, becomes more tubular, assumes a redder colour, has its tips pressed down, and soon drops out of the involucre, in which it leaves no appearance of a seed; hence I was ready to conclude that these flowers, the imperfection of whose pistilla at a certain age had before been noticed, were certainly barren, but on opening them, I found in the bottom of each a seed perfectly similar to that produced by, and inclosed in the calyx of the female flower, which does not enlarge as the other does, but partaking more of the nature of a capsule, on pressure, divides at top into four parts, and contains a blackish shining seed.

It may seem a little extraordinary, that the imperfect hermaphrodite flowers of this plant should produce perfect seed; but we should consider that they are perfect at first, and that there always is a number of Antheræ belonging to flowers farther advanced bursting near them, from whose pollen they may probably be impregnated.

SCOPOLI describes male flowers on this plant, having a sessile, shining, oblong, and pointed Nectary; surely he must consider the imperfect germen in the hermaphrodite flowers as a Nectarium, otherwise he sees farther than any of his contemporaries.

The curious manner in which these flowers shed their Pollen, or fertilizing dust, is known to most botanists, but may be new to some of our readers; each filament has a peculiarity of structure which renders it highly elastic, there are four of them in number, on their first appearance they all bend inward; as soon as the pollen is arrived at a proper state to be discharged, the warmth of the sun, or the least touch from the point of a pin, will make them instantly fly back with a degree of force, and discharge a little cloud of dust. This process is best seen in a morning, when the sun shines hot on the plant, in July and August; if the plant be large, numbers will be seen exploding at the same instant.

The *Parietaria*, which takes its name from its place of growth, is frequently found on walls, and among rubbish, especially on the walls adjoining the Thames, both above and below Westminster-bridge, it is not a native of Sweden, or the more northern countries; this autumn the same degree of cold (viz. about 31 of Fahrenheit's thermometer) which stripped the mulberry of most of its leaves, destroyed the greatest part of its herbage.

Mr. PHILIP MILLER (*vide Dict. ed. 6. 410.*) asserts that the *Parietaria* which grows wild in England is the Pellitory with a Basil leaf, *Parietaria Ocyms folio* BAUH. Pin. *Parietaria judaica* LIN. and that the *officinalis* LIN. which he says grows naturally in Germany and Holland, was not in England till the year 1727, when he first introduced it; in this opinion Mr. MILLER stands alone, and there is the greatest reason to suppose that he is deceived, and the more so, as the remainder of his account, in which he says that "the seeds are difficult to collect, as they are thrown out of their covers as soon as they are ripe with an elasticity," shows extreme inattention.

As a medicinal plant more virtues appear to have been attributed to the *Parietaria* than it deserves; it has been ranked as an emollient, to which, in the opinion of FLOYER and CULLEN, it has no pretensions, as a diuretic it was an ingredient in the nephritic decoction of the late Edinburgh Dispensatory, which is omitted in the present; in this last intention the expressed juice has been given in the dose of three ounces.

Mr. SOLE, Apothecary of Bath, well known to the Botanic World, for his extensive collection of indigenous plants, informs me that he has observed remarkably good effects from the juice of this herb in dropical cases, in which other diuretics had failed; he converts the juice into a thin syrup, and gives two table-spoonfuls or more thrice a day.

MONS. TOURNEFORT, speaking of the *Parietaria*, says, "Le sirop de Parietaire soulage fort les hydropiques." *Hist. des Pl. de Paris.* AURELIUS VICTOR informs us, that CONSTANTINE bestowed on the Emperor TRAJAN the name of *Parietaria*, because his statues and his inscriptions, like that herb, were found on all the walls of Rome. *Le Meme.*

It is recommended to be laid on the corn in granaries, for the purpose of driving away that destructive insect the Weevil. *Bradley's Farm. Direct. p. 122.*

EQUISETUM ARVENSE. CORN HORSE-TAIL.

EQUISETUM *Lin. Gen. Pl. CRYPTOGAMIA FILICES.*

Spica fructificationibus peltatis, basi dehiscentibus, multivalvi.

Raii Syn. Gen. 4. HERBÆ CAPILLARES ET AFFINES.

EQUISETUM *arvense* scapo fructificante nudo; sterili frondoso. *Lin. Syst. Vegetab. p. 457. Sp. Pl. p. 1516. Fl. Suec. n. 928.*

EQUISETUM caule florigero nudo, sterili verticillato, radiorum duodecim. *Haller. Hist. n. 1676.*

EQUISETUM *arvense. Scopoli Fl. Carn. n. 1253.*

EQUISETUM *arvense* longioribus setis. *Bauh. Pin. 16. Parkinsf. 1202. Raii Hist. p. 130. Corn Horse-tail.*

EQUISETUM *segetale. Ger. emac. 1114.*

HIPPURIS minor cum flore. *Dod. Pempt. p. 73.*

EQUISETUM minus terrestre. *I. B. III. 730. Hudson Fl. Angl. ed. 2. p. 265. Lightfoot Fl. Scot. p. 647.*

RADIX	perennis, gracilis, nigra, articulata, insigniter reptans, fibris nigricantibus e geniculis exortis capillata.	ROOT	perennial, slender, black, jointed, exceedingly creeping, with tufts of black fibres springing from the joints.
SCAPI	feminiferi ante caules frondosos prodeuntes, et cito marcescentes, crassitie culmi triticei majoris, palmares aut dodrantes, erecti, nudi, lutescentes, geniculati, geniculis 2, 3, 5, vaginis multifidis, nervosis, membranaceis, circumvestiti.	STALKS	producing the seeds springing up before the leaf-stalks, and soon withering, the thickness of a large wheat-straw, a hand's-breadth or more in height, upright, naked, yellowish, jointed; joints from two to five, covered with membranous ribbed sheaths, divided at top into numerous segments or teeth.
SPICÆ	feminiferæ terminales, oblongæ, obtusæ, unciales.	SEED-SPIKES	terminal, oblong, obtuse, about an inch in length.
CAPSULÆ	seu thecæ feminiferæ plurimæ, angulatæ, erectæ, circa receptaculum proprium collocatæ, et scuto orbiculato lutescente testæ, fig. 1. demum introrsum dehiscentes et pulverem virescentem effundentes, fig. 2, 3, auct. fig. 4.	CAPSULES,	or seed-cases, numerous, angular, upright, placed together round a partial receptacle, and covered with a yellowish orbicular shield, fig. 1, finally opening inwardly, and throwing out a greenish powder, fig. 2, 3, magnified, fig. 4.
CAULIS	pedalis et ultra, in apricis obliquus, striatus, scabriusculus, geniculatus. Vaginæ numerosæ, denticulatæ.	STALK	a foot or more in height, in open situations oblique, striated, roughish, jointed. The Sheaths numerous, and toothed.
FOLIA	verticillata, octo circiter in singulo verticillo, simplices, cauli similes.	LEAVES	whirled, about eight in each whirl, simple, and like the stalk.

Experiment and observation, which have discovered perfect seeds, if not real Stamina and Pistilla, in some of the plants of this hidden class, have hitherto failed in ascertaining what the powder is, which is contained in such abundance in the spikes of the Horse-tail, different Botanists differing widely in their opinions concerning it. LINNÆUS and SCOPOLI consider it as the true seed of the plant; HALLER and ADANSON as the male dust; and so strongly was the last mentioned author of this opinion, that he removed it from the cryptogamous plants, and placed it with the family of the pines, from which, however, as SCOPOLI very judiciously observes, it differs *toto cælo*.

We sat down to examine the fructification of this plant, in full expectation of finding Pollen, not Seed, contained in its cells. We conceived, *a priori*, that a substance so delicately formed, and so rapid in its growth, could scarcely produce capsules with ripe seeds; but we rose from our examination in the full belief of the powders being the real seed, so far as we could judge from its structure and æconomy: actual vegetation must however be proved, before we can arrive at certainty in this matter.

If a little of the powder be shaken out of the spike on a piece of white paper, a moderate magnifier discovers a motion in it, especially if it be breathed on. A similar motion is observed in the capsules of the Ferns when they throw out their seeds; and in the fine powder contained in the heads of the Jungermannia, if we apply a very considerable magnifier to this powder, we find its motion arise from a very different principle from that which actuated the two former. Here every particle of the powder has three or four, very rarely five, fine pellucid threads, which are club-shaped at the extremity: these threads are elastic, and, by variously extending and curling themselves up, occasion the motion which is so perceptible. Mons. ADANSON, who has minutely described this seed as Pollen, compares the appearance it sometimes assumes to a spider with its legs stretched out. Although these motions, which are extremely singular and diverting, are plainly seen with a good magnifier, we never could discover the body of the seed to make any sort of explosion as Pollen would, under similar circumstances of exposure.

The proper time to examine this curious phenomenon is in April, when the plant produces its spikes.

The medicinal virtues of the Equisetum are too problematical to deserve notice. Writers on the *Materia Medica*, rank it with the astringents.

The Farmer is deeply interested in a knowledge of this plant, as it is not only one of the most troublesome and difficult weeds to extirpate that we are acquainted with, but noxious even to cattle, especially kine: HALLER relates a particular case in which it proved fatal to a young heifer, by bringing on an incurable *Diarrhæa*.

Many parts of *Battersea Fields* exhibit this plant in perfection. It sometimes is found in meadows and under hedges; and, according to its situation, like all other plants, assumes a variety of appearances.



Equisetum arvense.

BRYUM BARBATUM. BEARDED BRYUM.

BRYUM *Lin. Gen. Pl. CRYPTOGRAMIA MUSCI.*

Anthera operculata. Calyptra lævis. Filamentum e tuberculo terminali ortum.

Raii Syn. Gen. 1. MUSCI.

BRYUM *barbatum* antheris erectis oblongis barbatis, operculo acuminato obliquo, pedunculis lateralibus.

BRYUM unguiculatum et barbatum tenuius et stellatum. *Dillen. Musc. tab. 48. fig. 48.* Small star-topped, clawed, and bearded Heads.

DENSISSIMIS cæspitibus modo Bryi purpurei ad muros et aggeres nascitur, <i>fig. 1.</i>	FORMS a thick turf on walls and banks, in the manner of the Bryum purpureum, <i>fig. 1.</i>
CAULICULI semunciales aut paulo plus, ramosi, erecti, foliosi, <i>fig. 2, 3.</i>	STALKS half an inch or somewhat more in height, branched, upright, and leafy, <i>fig. 2, 3.</i>
FOLIA e luteo-viridia, densa, lanceolata, acuta, inferioribus suberectis, supremis patentibus, <i>fig. 4. auct.</i>	LEAVES of a yellowish-green colour, growing thick together, lanceolate, pointed, the lowermost nearly upright, the uppermost spreading, <i>fig. 4. magnified.</i>
PEDUNCULI semunciales et ultra, ex imo seu ex medio nunquam e summitate furculi enati, singulares vel plures ex eodem furculo, rubentes, nitidi, flexuosi, bulbillo oblongo nudo superne rubro præditi, <i>fig. 5.</i>	PEDUNCLES half an inch or more in length, proceeding from the bottom or middle, but never from the top of the furculus, one or several from the same furculus, red, shining, crooked, furnished at bottom with a naked oblong bulb, red at top, <i>fig. 5.</i>
CAPSULÆ suberectæ, tenues, oblongæ, acuminatæ, olivaceæ, nitidæ, <i>fig. 6. Calyptra longa, acuminata, parum obliqua, fig. 7. Operculum longum, tenue, fig. 8. Cilix aurantiacæ, seu coccineæ spiræ modo contortæ, fig. 9.</i>	CAPSULES nearly upright, slender, oblong, pointed, of an olive colour, and shining, <i>fig. 6. Calyptra long, pointed, a little oblique, fig. 7. Operculum long, and slender, fig. 8. Cilix orange-coloured or scarlet, twisted in the form of a screw, fig. 9.</i>

The moss here represented is undoubtedly the *Bryum* figured by DILLENIIUS, in his forty-fifth plate, forty-eighth figure. Neither LINNÆUS nor Mr. HUDSON make mention of it. We are convinced, however, from repeated observations, that it is a species perfectly distinct. It approaches very near to the *Bryum imberbe* and *unguiculatum*. From the former it differs in having the Antheræ or Capsules terminated by long twisted ciliæ, and in having the peduncles always proceeding from the base of the furculus: this last character also strikingly distinguishes it from the *unguiculatum*.

It is not unfrequent about London, especially in the environs of Charlton, on walls, and barren hilly ground, with the *Bryum purpureum* and *cæspitium*, and produces its fructifications in December, January, and February.



Bryum barbatum.

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Phascum subulatum.

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Phascum acaule.

PHASCUM ACAULON. COMMON PHASCUM.

PHASCUM *Lin. Gen. Pl. CRYPTOGRAMIA MUSCI.*

Calyptra minima. Operculum nullum.

Raii Syn. Gen. 3. MUSCI.

PHASCUM *acaulon* anthera sessili foliis ovatis acutis. *Lin. Syst. Vegetab. p. 794. Sp. Pl. 1570. Fl. Suec. 960.*

PHASCUM *cuspidatum* caulescens, foliis ovatis cuspidatis patulis: terminalibus erectis conniventibus. *Schreber. de Phasco. t. 1. f. 1, 2.*

SPHAGNUM *acaulon* foliis ovato-lanceolatis, pilo aristatis. *Haller. Hist. 1726.*

SPHAGNUM *acaulon* bulbiforme majus. *Dill. Musc. 251. t. 32. f. 11. Raii Syn. 105. Lightfoot Fl. Scot. p. 695. Hudson Fl. Angl. p. 466. Oeder Fl. Dan. t. 249. f. 1.*

PHASCUM SUBULATUM. HEATH PHASCUM.

PHASCUM *subulatum* acaule, anthera sessili, foliis subulato-setaceis patulis. *Lin. Syst. Vegetab. p. 794. Sp. Pl. 1570.*

PHASCUM *subulatum* caulescens, foliis lanceolato-linearibus patulis. *Schreber de Phasco, p. 80.*

SPHAGNUM *acaulon* trichodes. *Haller. Hist. n. 1727. Dillen. Hist. Musc. 251. t. 32. f. 10. Oeder Fl. Dan. t. 249. Lightfoot Fl. Scot. p. 693. Hudson. Fl. Angl. p. 466.*

DILLENIIUS, who drew the figures of his incomparable work on mosses, without using glasses of any considerably magnifying power, or, perhaps, without attending so much to the minutiae of the parts of fructification as the practice is at present, described these plants as *having no Calyptra*, and united them with the genus *Sphagnum*. LINNÆUS afterwards made a distinct genus of them, but without correcting the error of his predecessor. The following is the description of the genus *Phascum*, which he gives in the 6th edition of the *Genera Plantarum*.

Masculus flos subsessilis vel brevi pedunculo.

CAL. Calyptra nulla.

ANTHERA ovalis ore ciliato, tecta operculo acuminato.

RECEPT. *Apophysis* nulla.

Femineus flos.

Several Botanists afterwards describing and delineating the *calyptra*, LINNÆUS, in the 13th edition of his *Systema Naturæ*, published by MURRAY, under the title of *Systema Vegetabilium*, alters it thus:

ANTHERA operculata: ore ciliata. Calyptra caduca, minuta.

This generic description, thus altered, is adopted by Mr. HUDSON, without any remarks on its inapplicability to the English *Phasca*. He should have informed us, that, however well the character might accord with any Foreign *Phascum*, the English ones, at least both these here figured, which are the most common, have neither *Operculum* nor *Cilia*. Of this we are fully convinced from repeated examination; and have the pleasure of having our experiments confirmed by the accurate and ingenious SCHREBER, who, in his most excellent *Monographia, Observationes de Phasco*, has the following passages: "Suturam, qua plerorumque muscorum vascula infra apicem, ubi deinde operculum abscedit, cinguntur, in nulla hujus generis specie observare potui. Operculum enim Phascis in universum omnibus deest, et vasculum undique in extremum apicem usque clauditur, sine ullius determinatæ aperturæ vestigio, quamobrem compressum utcumque rumpi solet. Cilia igitur in quocumque Phasco frustra quærentur."

Again, speaking of the Capsule, he says: "*Pecten* in ea nullus adest nec ullam aperturæ cujusdam determinatæ aut foraminis, emissioni contentorum inservientis, vestigium reperire unquam potui. Non enim sponte aperitur, sed integra persistit; donec maxima foliorum pars putruerit, quod in *Ph. pilifero* sæpius observavi, aut e foliis apertis integra elabitur."

This singular deficiency then, both of the *Operculum* and *Ciliæ*, forms, in our opinion, the best criterion by which to distinguish this genus of plants, and we have altered the generic character accordingly.

PHASCUM ACAULON.

THERE is no moss more common on the moist banks about London than the *Phascum acaulon*; but as it exhibits no appearance of fructification till in an advanced state, and then only to the inquisitive observer, it generally passes unnoticed. Mr. LIGHTFOOT gives a short, but very expressive, description of it, as follows: "The leaves, when young, connive together, in the form of a small oval bulb, about one sixth of an inch long, and hide the capsule, which is oval and orange-coloured at first, but when ripe fuscous and shining, and about the size of a millet seed." We have represented the plant at fig. 1. as it usually grows on the ground; fig. 2, 3. detached plants of their natural size; fig. 4. a plant magnified; fig. 5. a single leaf magnified; fig. 6. the anthera or capsule magnified; fig. 7. the calyptra also magnified.

PHASCUM SUBULATUM.

THE *Phascum subulatum* is not so frequently met with as the *acaulon*, yet is not uncommon on heaths, in the sand pits about Charlton, and on dry banks in a variety of places. They are both found in fructification from December to January.

In this species the capsule, though smaller, is much more distinctly seen, and its calyptra is visible even to the naked eye. Like the other, it varies much in size, as also in the length, of its peduncle. Mr. LIGHTFOOT considers it as the least of our English plants; but Mr. DICKSON, of Covent-Garden, who may justly be called *maximus in minimis*, has discovered a *Phascum*, the *serratum* of SCHREBER, which is certainly ten times smaller. Fig. 1. represents the *subulatum* as it usually grows; fig. 2, 3. detached plants; fig. 4. a plant magnified; fig. 5. a single leaf magnified; fig. 6. the capsule; fig. 7. the calyptra magnified.

JUNGERMANNIA COMPLANATA. FLAT JUNGERMANNIA.

JUNGERMANNIA *Lin. Gen. Pl. CRYPTOGRAMIA ALGÆ.*

MASC. pedunculatus, nudus. *Anthera* quadrivalvis.
FÆM. sessilis, nudus, feminibus subrotundis.

Raii Syn. Gen. 18. MUSCI.

JUNGERMANNIA *complanata* furculis repentibus, foliolis inferne auriculatis, duplicato-imbricatis, ramis æqualibus. *Lin. Syst. Vegetab. p. 803. Sp. Pl. p. 1599. Fl. Suec. 1041. Weis. Cryptog. p. 124.*

JUNGERMANNIA foliis rotundis alterne imbricatis, caule plano multifloro, setis brevissimis. *Haller Hist. n. 1860.*

JUNGERMANNIA *complanata*: furculo reptante, foliis subrotundis serie duplici ordinatis, subtus appendiculatis; vaginis ramorum plano-truncatis. *Necker. Meth. Musc. p. 142.*

LICHENASTRUM imbricatum majus squamis compressis et planis. *Dillen. Musc. 496. t. 72. f. 26.*

JUNGERMANNIA foliis circinatis imbricatim dispositis ex viridi flavescentibus. *Michel. Gen. 7. t. 5. f. 21.*

LICHENASTRUM imbricatum majus. *Raii Syn. 111. Hudson. Fl. Angl. p. 514. Lightfoot. Fl. Scot. p. 781.*

Descriptio ex W E I S.

SURCULIS variæ longitudinis, ab unciali ad biuncialem longitudinem, planis, inordinate ramosis ad cortices arborum, latis cæspitibus repit.

FOLIOLA dense imbricata, alterna, rotunda, subpellucida, plana, furculi nervum superne tegunt; inferne nervo adherent parvæ, rotundæ squamulæ. Color pallide e luteo viridis. Recens mollis tactu est, aqua madida tota flaccescit. Ad extremitates, et passim ad exortum ramulorum prodeunt thecæ planæ, squamis duplo vel triplo longiores, dilute virides, truncatæ, e quibus setæ breves, lineam non excedentes emergunt, tenuissimæ, cum parvis nigris capitulis, in fuscas lacinulas pilosas diffilientes.

- Fig. 1. Planta magn. nat.*
Fig. 2. Pars ejusdem lente aucta.
Fig. 3. Pars ejusdem inferior.
Fig. 4. Theca seu Vagina.
Fig. 5. Pedunculus.
Fig. 6. Capitulum adhuc integrum.
Fig. 7. Capitulum findens pulveremque spargens.
Fig. 8. Capitulum demisso pulvere.

Description from W E I S.

SURCULI of various lengths, from one to two inches, flat, irregularly branched, creeping on the bark of the trees in large patches.

LEAVES of a pale yellow-green colour, closely imbricated, alternate, round, somewhat transparent, flat, above entirely covering the mid-rib of the furculus, beneath small round scales adhere to the mid-rib, the whole plant, when fresh, is soft to the touch, moistened with water it grows flaccid. At the extremities, and here and there at the origin of the branches, proceed flat *sheaths* appearing truncated or cut off at top, from whence proceed short setæ or peduncles about a line in length, very slender, and terminated by small black heads splitting into four brown hairy segments.

- Fig. 1. The plant of its natural size.*
Fig. 2. A part of the same magnified.
Fig. 3. The underside of the same.
Fig. 4. The Case or Sheath.
Fig. 5. The Peduncle.
Fig. 6. The Capitulum as yet entire.
Fig. 7. The Capitulum splitting and discharging its powder.
Fig. 8. The Capitulum with the powder discharged.

The name of *Jungermannia* was given to this genus by MICHELI in honour of JUNGERMANNUS, a botanist of the last century.

As LINNÆUS considers the Capsules of the Mosses as the *Antheræ* containing *Pollen*, so in like manner he regards the *Capitula* of the present genus as containing *Pollen* also, and the little apparently pulverulent balls, visible only on a few of the *Jungermannia*, but found on most of the *Mnia* as the female flowers, producing seeds. Vid. *Generic Character*.

With all due deference to such respectable authority, we are of opinion, that the character of this genus would be less complex, and equally complete, without calling in those balls or sphaerophylli, as NECKER terms them, at all.

The *Capitula*, or little heads, splitting when ripe into four parts, replete with a fine powder (whether pollen or seed is immaterial) attached to numerous hairs growing to the inside of the *Capitula*, are characters which will in all cases sufficiently distinguish this genus. The little heads of these plants are capable of affording much microscopic entertainment. Take a head ready to burst open, place it before the microscope, assist its opening with the point of a needle, and the elastic hairs on the inside will instantly appear in motion, and throw off the globules attached to them in great numbers, and with considerable force.

The present species is one of the most common of this genus, and may be found in great plenty and perfection about the end of *January*, spreading on the bark of the Oak and other trees in woods, particularly *Charlton-Wood*.

It is distinguishable from another, equally common, by the pale green colour of its leaves.



Jungermannia complanata.

AGARICUS PROCERUS. TALL MUSHROOM.

AGARICUS *Lin. Gen. Pl.* CRYPTOGAMIA FUNGI.

Fungus horizontalis, subtus lamellosus.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *anulatus* stipitatus, pileo campanulato subfusco squamoso, lamellis albidis, stipite bulboso anulato. *Lightfoot Fl. Scot. p. 1025.*

AGARICUS *procerus* stipitatus pileo hemisphærico lacerato-squamoso rufescente cinereo, lamellis albis, stipite longo cylindrico acetabulo inserto. *Hudson Fl. Angl. ed. 2. p. 612.*

AGARICUS *procerus.* *Scopoli Fl. Carn. n. 1465.*

AMANITA petiolo procero, anulato, in acetabulum pilei immisso, pileo squamoso et maculato, lamellis albis. *Haller. Hist. n. 2371.*

AGARICUS; pileo papillari, amplissimo, in margine fornicato, lacero et filamentoso; petiolo anulato procero, inferius tumido, pilei acetabulo inserto. *Gleditsch. Fung. p. 114.*

FUNGUS pileolo lato, longissimo pediculo variegato. *C. B. Pin. 371. n. 24.*

FUNGI longissimo pediculo candicantes, sed maculati esculenti. *J. B. III. 826. Raii Syn. p. 3. n. 10. Schæff. Fung. t. 22, 23.*

STIPES solitarius, spithamæus, et ultra, crassitie indicis, basi bulbosus, fistulosus, *fig. 3.* albidus, squamis fuscis plerumque notatus.

VOLVA ampla, persistens, lacera, bilamellosa, lamella inferiore membranacea, subfusca, superiore alba, spongiosa.

FILEUS palmaris et ultra, primo subglobosus, dein campanulatus, demum planus, squamis fuscis, floccidis, circa verticem crebrioribus, maculatus; vertex tumidus, coriaceus; caro crassitie lamellarum, alba, mollissima, spongiosa.

LAMELLÆ confertæ, fragiles, albidæ, basi in marginem acetabuli pilei insertæ, pulverem subtilissimum cinerascens spargentes. *fig. 1, 2.*

STALK single, six inches or more in height, the thickness of the forefinger, bulbous at bottom, hollow, *fig. 3.* whitish, and generally mottled with brown scales.

RUFFLE large, permanent, torn, composed of two lamellæ or coats, the lowermost membranous, and brownish, the uppermost white and spongy.

CAP three inches and more in diameter, at first roundish, then bell-shaped, and lastly flat, spotted with brown, flaky, scales; thickest round the crown; crown prominent and leathery, flesh the thickness of the gills, white, very soft and spongy.

GILLS numerous, brittle, whitish, inserted at their base into the edge of the cup of the cap, throwing out a very fine ash-coloured powder. *fig. 1, 2.*

This Mushroom, inferior to few in point of elegance, is frequently found in Woods, and dry hilly Pastures among Heath, Broom, &c. in the months of September and October; I have found it in the environs of *Hornsey Wood*, and *The Spaniard, Hampstead Heath*; in *Richmond Park*, and many other places.

It is a well-known Mushroom, and easily distinguished from all others by its tallness, its bulbous base, its large ruffle, its spongy cap, which is flaky, or scaly, not warty at top, and which, as Mr. LIGHTFOOT justly observes, separates it from the *verrucosus*, with which it has no small affinity.

I have seen it exposed to sale in Covent Garden market, for the true eatable one, but a Connoisseur will distinguish it by the sponginess of its flesh, which renders it in a great degree unfit for eating.



Agaricus procerus

Sowerby Fungi plate 190. V.2.

AGARICUS VELUTIPES. VELVET-STALK'D MUSHROOM

AGARICUS *Lin. Gen. Pl. CRYPTOGAMIA FUNGI.*

Fungus horizontalis, subtus lamellosus.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *velutipes* fasciculofus, pileo planiusculo fulvo, stipite nudo, tenerrime villosus, fuliginosus.

FUNGUS glutinosus colore aurantio. *Vaillant Bot. Paris. p. 72. 8. t. 12. fig. 8, 9.*

FUNGUS fasciculofus, pileo orbiculari lutescente, pediculo fusco, tenerrime villosus, lamellis ex flavo candicantibus. *Raii Syn. ed. 3. p. 9.*

Ex ligno putrescente, seu arboribus cæsis, coacervatim plerumque nascitur hic fungus.	† This Fungus usually grows in clusters, out of decayed wood or felled trees.
VOLVA ad radicem nulla.	† SHEATH or egg at the root wanting.
STIPES in plantâ mediæ magnitudinis longitudine in- dicem, crassitie pennam anserinam æquat, teres, haud infrequenter compressus, fistulosus, te- nerrime villosus, seu velutinus, inferne præ- fertim in vetustis e rufo-nigricans, fuligine quasi infectus, carneâ citrinâ, in tenuissima fila sericea partibili.	† STALK in plants of a middle size about the length of the forefinger, and thickness of a goose-quill, round, not unfrequently flat, hollow, velvety, on the lower part, especially in the old ones, of a reddish black colour, as if tinged with foot, the flesh citron coloured, and separable into silk-like threads.
ANNULUS nullus.	† RING, or ruffle, wanting.
PILEUS uncialis ad triuncialem, modice convexus, sæpe difformis, fulvus, glutinosus; LAMELLÆ plurimæ, inequales, ex albido-lutescentes, in majoribus et senescentibus fungis crassæ, coria- cæ, luteæ, ad marginem pilei undulatæ, lon- gioribus basi auriculatis, omnibus venosis; POLLEN cinereum.	† CAP from one to three inches in diameter, moderately convex, often shapeless, of an orange or tawny colour, slimy; GILLS numerous, unequal, of a whitish yellow colour, in the larger and older fungi thick, leathery, yellow, waved towards the edge of the cap, the longer ones ear'd at the base, and all of them veiny; POLLEN, or seed, ash-coloured.

Many of the fungi, like the more perfect plants, make their appearance only at a certain period of the year; others are continually springing up and producing their fructifications, almost regardless of particular seasons, of the latter kind is the fungus here figured, at least it may be found from September to January in the greatest plenty.

It usually grows out of dead, or decaying wood, especially willow and elm, and almost always in clusters of different sizes, according to particular situations; at the bottoms of old willow-trees I have often seen fifty or more in a cluster, with the caps of some of the largest almost as broad as the palm of one's hand, while on small rotten sticks the cluster has consisted of not more than three or four, with caps not more than half an inch in diameter, but however it may vary in regard to size, &c. it luckily has a character which always readily distinguishes it, and this is its velvety and footy stalk, most conspicuous in those which are advanced.

RAY's synonym and description correspond pretty accurately with our fungus; Mr. HUDSON appears to have overlooked or confounded it with some other species; VAILLANT has given a good figure, and accurate description of it, in his most elegant work the *Botanicon Parisiense*.

To the taste this mushroom is rather agreeable, and devoid of all acrimony, perhaps it may be eaten with safety, it is not however of the kind recommended by HORACE,

————— *pratenfibus optima fungis*
Natura est: aliis malè creditur.



Agaricus Velutipes.

Sow: Fungi - 263 & 384: Pl. 3

AGARICUS FLOCCOSUS. SHAGGY MUSHROOM.

AGARICUS *Lin. Gen. Pl. FUNGI.*

Fungus horizontalis, subtus lamellosus.

Raii Syn. Gen. 1. FUNGI.

AGARICUS *floccosus* stipitatus fasciculofus, pileo stipiteque piloso-squamosis, e flavo fuscis.

PICROMYCES tunicatus. *Batarr. p. 47. t. 8. H.*

AGARICUS floccosus. *Schæffer. Icon. Fung. t. 61.*

Habitat ad radices arborum, plerumque cespitosus.	Found at the roots of trees, and generally in clusters.
STIPES palmaris et ultra, crassitie digiti minimi seu major, subcylindræus, firmus, carnosus, vix fistulosus, interne albus, supra annulum nudus, infra filamentosus, pileo concolor.	STALK four inches or more in height, the thickness of the little finger or larger, somewhat cylindrical, firm, fleshy, scarcely hollow, white within, above the ring naked, below shaggy, of the same colour as the cap.
ANNULUS parvus, paulo infra pileum positus.	RING small, placed a little beneath the cap.
VELUM araneosum, fugacissimum.	VEIL cob-webby and very fugacious.
PILEUS: <i>Pilei</i> diameter sesquiuncialis ad palmarem, flavo-fuscus, convexus, in centro nonnunquam fastigiatus, piloso-squamosus. <i>Lamellæ</i> plurimæ, confertæ, inæquales, ex albo lutescentes.	CAP: from an inch and a half to four inches in diameter, of a yellow-brown colour, convex, sometimes rising to a point in the middle, shaggy. <i>Gills</i> numerous, close, irregular, of a yellowish-white colour.

It doth not appear, that this Mushroom is described either by Mr. RAY or Mr. HUDSON. It approaches very near to the *squamosus* of the latter, and of which Baron HALLER seems disposed to consider it as a variety; to us it appears to be a species perfectly distinct.

BATARRA gives an indifferent figure of it; SCHÆFFER an exceeding good one, very expressive of the plant we intend: the specimens from whence his drawings were made seem to have been smaller than ours, and some of them more pointed, which they sometimes are. Those represented on our plate were found about the middle of *October*, growing at the bottom of a pear-tree in the garden of Mr. JOHN CHORLEY, at *South Lambeth*, where they come up regularly every year. I have also frequently found this species in the *Oak of Honour Wood*, near *Peckham*. So far as I have remarked, it always grows out of wood, in which respect it differs from the *finetarius*, which also has a ragged head, but grows out of the earth, and has a much longer cap.

When young, this Fungus is principally distinguished by the roughness of its cap, which appears almost prickly. Its colour varies from a dingy to a more lively brown.

It is not of the eatable kind; nor do we know any instance of its proving poisonous; the maggots of flies devour it.



Agaricus floccosus.

Sow. Fungi Vol. 3. P. 284.

Rugosus. With.
BOLETUS LUCIDUS. LACQUERED BOLETUS.

BOLETUS. *Lin. Gen. Pl. CRYPTOGRAMIA FUNGI. Fungus horizontalis, subtus porosus.*

Raii Syn. Gen. 1. FUNGI.

BOLETUS *lucidus*, pileo coriaceo, superne castaneo lucido, fulcis circularibus notato, inferne albo; poris minutissimis.

BOLETUS *rugosus*. *Jacquin. Fl. Austr. t. 169.*

FUNGUS coriaceus, pileolo latissimo atrorubente, pediculo brevissimo. *Raii Syn. ed. 3. p. 11. ?*

FUNGUS speciosus putridis arborum truncis et stipitibus præsertim coryli innascitur, totus lignoso-coriaceus et persistens.

This handsome Fungus grows out of the trunks of decayed trees, particularly the stumps of the hazel, and is throughout of a leathery or somewhat woody substance, and permanent.

STIPES durus, inæqualis, castaneus, vernice veluti obductus.

STALK hard, uneven, of a chestnut colour, shining as if varnished.

PILEUS plerumque subdimidiatus, nonnunquam orbiculatus, planus, superne castaneus, nitidissimus, fulcis circularibus concentricis notatus, rugosus, inferne dum recens albissimus; poris minutissimis.

CAP for the most part forming half a circle, sometimes a whole one, flat, on the upper side of a chestnut colour, and highly polished, marked with circular concentric grooves, the edge thick and wrinkled; on the under side, when fresh, very white, the pores exceedingly small.

FUNGI duo connati, in tabula proponuntur, hinc atque illinc spectati, tum fungi pars inferior lente aucta ut pori magis luculenter appareant.

Two Fungi growing together, are represented on the plate in two different views; also part of the under side magnified, to shew the pores more plainly.

In the month of November 1780, I fortunately found the fine specimen of this Boletus, exhibited on the plate, in the Wood adjoining the Oak of Honour, near Peckham; on first discovering it, the top of the Pileus and stalk were of so bright a colour, and so beautifully polished, that I scarcely knew whether I had found a natural or an artificial production; a view of its under side, however, soon convinced me it was natural; it grew out of a rotten hazel stump.

One principal character of this Fungus, is its polished or rather lacquered surface, for it has all the appearance of having been varnished; this I believe it possesses in all its situations; and on this account I have given it a name different from *Jacquin*, who has an excellent figure of it under the title of *rugosus*, in his *Fl. Austriaca*. The other characters which seem to be constant, are the depressed circles on the upper side of the Pileus, its wrinkled, thick, and somewhat inverted edge, which is very apt to break out on the under side of the Pileus, as represented on the plate, but omitted by *JACQUIN*; the unusual whiteness of the Pileus on its under side and the extreme fineness of its pores, which may be overlooked; it appears to be inconstant in the shape of its Pileus (which is sometimes *orbiculatus*, as is shewn on the plate in a smaller Fungus of the preceding year, and sometimes *dimidiatus*); and in its stalk, which is sometimes wanting, as I discovered from a specimen growing out of the bottom of an elm tree near Hyde-Park.

The stalk of the specimen figured, which I preserved, has not shrunk at all, the Pileus is about one third less, but retains its form and much of its beauty.

There was some reason to suspect this Boletus of being the *perennis* of LINNÆUS, but the description given of that plant in his *Flora Lapponica* removed every doubt, and convinced me he had not described it.



Boletus lucidus.



Phallus caninus.

Inodorus. Sw.

PHALLUS CANINUS. RED-HEADED MORELL.

PHALLUS *Lin. Gen. Pl. CRYPTOGAMIA FUNGI.*

Fungus supra reticulatus, subtus lævis.

Raii Syn. Gen. FUNGI.

PHALLUS *caninus* volvatus, stipitatus, stipite celluloso, capitulo impervio, rubro, rugoso.

PHALLUS *exilis* Marattæ. *Batarr. Fung. p. 7. t. 40. F. ?*

PHALLUS *caninus* volvatus stipitatus, pileo rubro celluloso acuto, apice clauso. *Hudson. Fl. Angl. ed. 2. p. 630.*

VOLVA magnitudinis nucis moschatæ, oblongo-ovata, alba, lævis, intus gelatinosa, tunicâ interiore superne truncatâ, *fig. 1, 2.*

STIPES extra volvam, sesquiuncialis, seu biuncialis, magnitudine calami anserini majoris, teres, filiformis, inferne acuminatus, cellulosus, subpellucidus, pallide aurantiacus, intus cavus, cito flaccescens. *fig. 3, 4, 5, 6.*

CAPITULUM, nam pileus vix dici potest, stipiti infidet, estque sessile, semunciale, diametro stipitis, oblongum, subacuminatum, apice impervio albescente, primo lividum, membranâ nitidâ, tenuissimâ tectum, infra quam exigua quantitas humoris virescentis, seu materies feminalis fere inodori cernitur, quâ remotâ superficiei capituli rubra et transversim rugosa apparet, nequaquam vero cellulosa, sicut in impudico.

VOLVA, or egg, the size of a nutmeg, of an oblong, ovate shape, white, smooth, gelatinous within, the inner coat cut off at top. *fig. 1, 2.*

STALK, beyond the volva, an inch and a half or two inches in length, the size of a large goose-quill, round, filiform, terminating in a point at bottom, cellular, somewhat transparent, of a pale orange colour, hollow within, soon becoming flaccid. *fig. 3, 4, 5, 6.*

HEAD, for it cannot properly be called a cap, sits on the stem, is sessile, about half an inch in length, and of the diameter of the stem, oblong, a little pointed, impervious and whitish at top, at first of a livid colour, and covered with a very thin, shining membrane, underneath which is a small quantity of a greenish liquid, or seminal matter, almost scentless, which being removed, the surface of the head appears of a red colour, and transversely wrinkled, but by no means cellular, as in the stinking Morell.

Mr. EHRET, the celebrated botanic painter, appears to have been the first who discovered this rare Fungus in this country; he found it in a wood near *Salop**, and made drawings of it for one of his principal patrons. Mr. HUNTER, gardener to the Earl of MANSFIELD, lately found it, though very sparingly, in *Caen Wood*, and communicated several specimens of it to Mr. DICKSON of Covent Garden. This autumn 1781, on the 20th of September, I was fortunate enough to be present at the discovering of one of them in Lord MANSFIELD's small Pine wood, famous for producing the *Phallus impudicus*, *Hydnum auriscalpium*, and other Fungi; I was in search of these, when my draughtsman Mr. SOWERBY pointed out to me a white substance, risen a little above the surface of the ground, and which at a distance resembled the cap of a small white mushroom; not suspecting it to be any thing extraordinary, I took it up with less caution than I should otherwise have done, and on opening it found it to be the *Phallus caninus*, in the state represented at *fig. 1.* From the hasty manner in which it was gathered, I had no opportunity of observing whether its roots were similar to those of the *Phallus impudicus*, but suspect they were; on examining it the next morning I was pleased to find that the stalk had shot out from its inclosing volva more than an inch; the volva contained a jelly in the manner of the *impudicus*, in passing through which, the stalk became covered with it, (this is prevented from taking place in the *impudicus*, because the pileus is much wider than the stalk) the stalk was cellular and hollow, equally rapid in its growth as the *impudicus*, but as its base contained within the volva ran out to a finer point, so the body of it was more uniformly of a size throughout, and of a faint orange colour; not having that firm waxy texture which enables the *impudicus* to support itself for many days, it quickly became flaccid after attaining its full growth.

Thus far we may observe a great similarity in the structure and œconomy of the two plants we have been comparing; in the remaining part, containing the fructification, we find an amazing difference. The *Phallus impudicus* carries on the top of the stalk a very distinct and perfect Pileus, or Cap, on the outside of which the seminal matter is deposited in cells, without the least covering; in the *caninus* there is properly speaking no Pileus, the part on the outside of which the seminal matter is lodged, forms a capitulum, or head, which is only a continuation of the stalk, as appears on dissection, differing in its structure and colour, this head has a *wrinkled*, not a *reticulated* surface, within these wrinkles, which are not very deep, the seminal matter is contained, and (contrary to what we find in the *impudicus*) covered by a very thin membrane; we may observe that this matter has very little smell in it, nor do flies appear particularly fond of it.

This unusual structure of the capitulum by no means agrees with LINNÆUS's generic character of a *Phallus*, as that implies a *Pileus smooth on the under, and reticulated on the outer side*, with which the *impudicus* perfectly corresponds, and yet every botanist would call this a *Phallus*; hence there appears a necessity for altering its generic character, the essence of which seems to consist in the *Seeds being contained in a jelly-like liquifying substance, on the outside of a Capitulum or Pileus.*

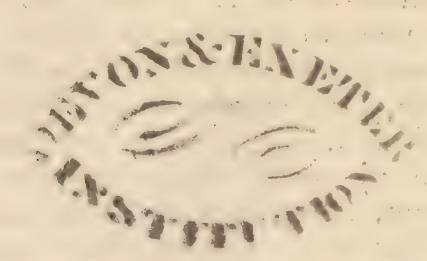
BATARRA's figure and description may possibly be intended for this Fungus, there is no knowing with certainty, so great is their obscurity.

* In the margin of a Ray's Synopsis which had been Mr. Ehret's, belonging to Mr. Richard Haworth, Apothecary of Chancery-lane, who kindly lent it me, there is the following remark at the *Phallus impudicus*, in Mr. Ehret's own hand writing: "a smaller sort found in a wood near Salop, with Mr. Moore 1741, but it did not stink."

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